

Substance Use Trends in San Francisco through 2021

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1 INTRODUCTION

We are pleased to release the report on substance use indicators through 2021 for the City and County of San Francisco (CCSF). Substance use plays a role in the lives of all San Franciscans and for some can result in social, medical, or legal difficulties.

The goal of this report is to track the impact of substance use on health indicators in San Francisco. The data facilitate the assessment of trends in utilization of healthcare services for substance use disorders and related problems, diseases associated with substance use, and overdose and other substance-related deaths.

From 2006 through 2016, as the national overdose crisis escalated, San Francisco saw an increase in the estimated number of people who inject drugs from fewer than 10,000 to nearly 25,000 persons. Despite this change, the city did not see an increase in overall overdose mortality from opioids, cocaine, or methamphetamine during that same period. We attribute this success to the efforts made by San Francisco residents and service providers. For example, from research with the Drug Overdose Prevention and Education (DOPE) Project, we know people who use heroin or methamphetamine are also the most likely people to use naloxone to reverse an opioid overdose, supporting their community by saving lives.

Unfortunately, as the national overdose crisis continued, San Francisco did ultimately witness an increase in overdose deaths beginning in 2018, attributed to a rise in fentanyl. Fentanyl initially affected the eastern half of the United States, as well as Canada, arriving in the West much later. Even regions with robust overdose prevention programs, such as the supervised injection facilities of Vancouver, British Columbia, have struggled and had to further innovate to manage the arrival and growing use of fentanyl. The COVID-19 pandemic also influenced overdose mortality, particularly during Shelter-in-Place, which worsened social isolation. Fortunately, overdose deaths declined in 2021.

This report details ongoing efforts to address substance use in San Francisco in 2021, including: expanding naloxone distribution for overdose prevention, use of buprenorphine not only for treatment of opioid use disorder but also overdose prevention, syringe access for blood-borne disease prevention, programs to treat hepatitis C infection among people who use substances, the San Francisco Sobering Center for alcohol use management, the Addiction Care Team of Zuckerberg San Francisco General Hospital, and the Street Overdose Response Team.

We are proud of the residents and providers of San Francisco who care for our community. We hope this report informs renewed efforts to support the health and safety of all San Franciscans.

2 HIGHLIGHTS

Mortality

- Overdose death in San Francisco from opioids, cocaine, and methamphetamine decreased by 11% from 2020 to 2021.
- Overdose deaths continued to be driven by **fentanyl** and related analogues, often in combination with cocaine or methamphetamine. Deaths involving fentanyl tended to occur among younger persons than deaths not involving fentanyl.
- Males, persons aged 50 to 59 years, and Black/African Americans had the highest rates of overdose mortality related to the combined category of opioids, cocaine/crack, and methamphetamine.

Substance use disorder (SUD) treatment

- Heroin, followed by alcohol and methamphetamine, were the most common primary substances resulting in admission to publicly funded SUD treatment programs or methadone maintenance programs.
- Admissions for fentanyl increased substantially. Among persons being admitted to SUD treatment, smoking was the most common route of administering fentanyl and increased from 52% of admissions in 2020 to 68% in 2021.
- The overall number of SUD treatment admissions and the number of unique individuals admitted continued to decline in 2021, a trend attributed to:
 - The COVID-19 pandemic;
 - Increased treatment of opioid use disorder from 2015-2021. The number of people treated for opioid use disorder with buprenorphine outside of the specialty SUD treatment system increased by 1,555, more than offsetting the decline in the number of people seeking care in the specialty SUD treatment system;
 - Lack of housing, a barrier to some SUD treatment services.
- SUD treatment rates were highest among males and Black/African Americans.

Additional Interventions

- Healthcare providers reduced the number of opioid prescriptions dispensed by 52% and the number of morphine milligram equivalents in each prescription by 36% since 2010.
- The distribution of **naloxone**, continued to increase in 2021, with 33,495 naloxone kits distributed by and 9,492 overdose reversals reported to community organizations, which was a substantial increase over the 4,307 reversals reported in 2020. Multiple other settings also furnished naloxone, including paramedics, primary care, the city's behavioral health pharmacy, and retail pharmacies.
- The Street Overdose Response Team (SORT) was implemented, serving 757 calls in the last 5 months of 2021.
- End Hep C SF, a citywide collaboration, continued to support initiatives to prevent and treat hepatitis C infections among people who use substances.
- SFDPH continued to implement multiple programs related to Mental Health SF, including enhanced care coordination, street crisis response teams staffed with behavioral health clinicians and peers, expanded buprenorphine access, and a drug sobering center.

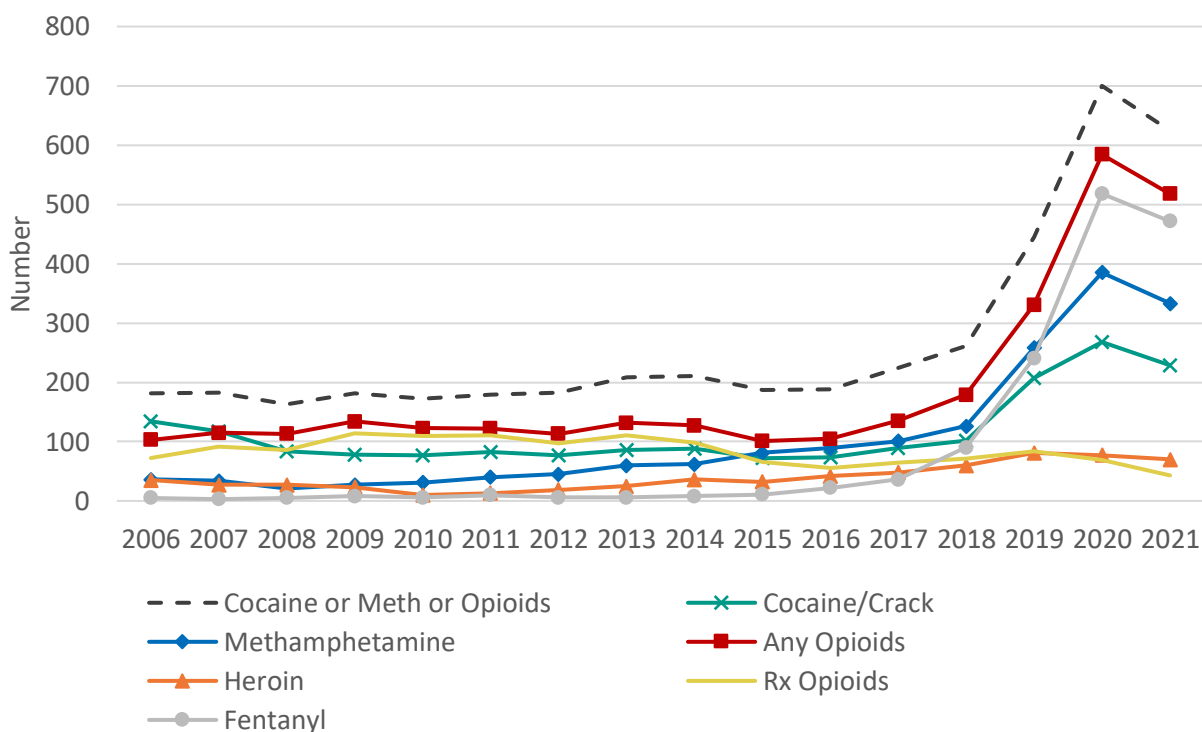
3 SUBSTANCE USE INDICATORS, OVERALL

3.1 OVERALL OPIOID, COCAINE, AND METHAMPHETAMINE OVERDOSE MORTALITY

The vast majority of overdose (i.e. acute poisoning) deaths in San Francisco involve opioids, cocaine/crack, and methamphetamine. Overdose mortality was fairly stable from 2006 to 2016, and then started to rise due to fentanyl. Starting in 2018, deaths related to cocaine and methamphetamine also started to increase. Overdose deaths involving fentanyl rose to 518 in 2020, then declined 9% to 472 in 2021 (**Figure 1**).

In total, 625 overdose deaths were caused by an opioid, cocaine/crack, or methamphetamine in 2021. Of these, 83% involved an opioid (of the 625 overdose deaths, 7% involved prescription opioids, 11% involved heroin, and 76% involved fentanyl), 37% involved cocaine/crack, and 53% involved methamphetamine (Figure 1).

Figure 1: Number of Opioid, Cocaine, or Methamphetamine Overdose Deaths by Non-Mutually Exclusive Substance Category in CCSF, 2006–2021

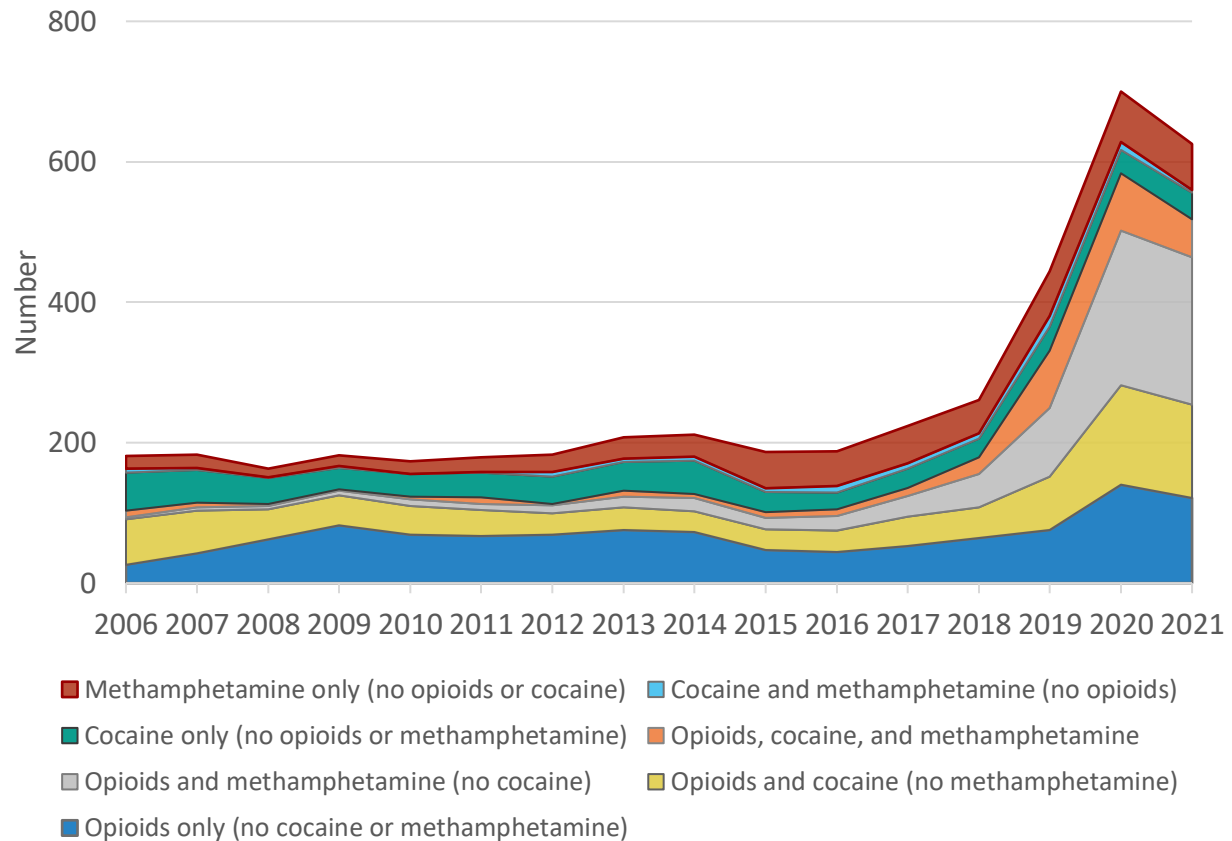


Substance-related overdose deaths were identified using textual cause of death fields, determined by the San Francisco Office of the Chief Medical Examiner. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Recent changes in overdose mortality shown in **Figure 2** were driven by opioids; more specifically, these increases were driven by fentanyl (see **Figure 29**).

Figure 2: Number of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Mutually Exclusive Substance Category in CCSF, 2006–2021

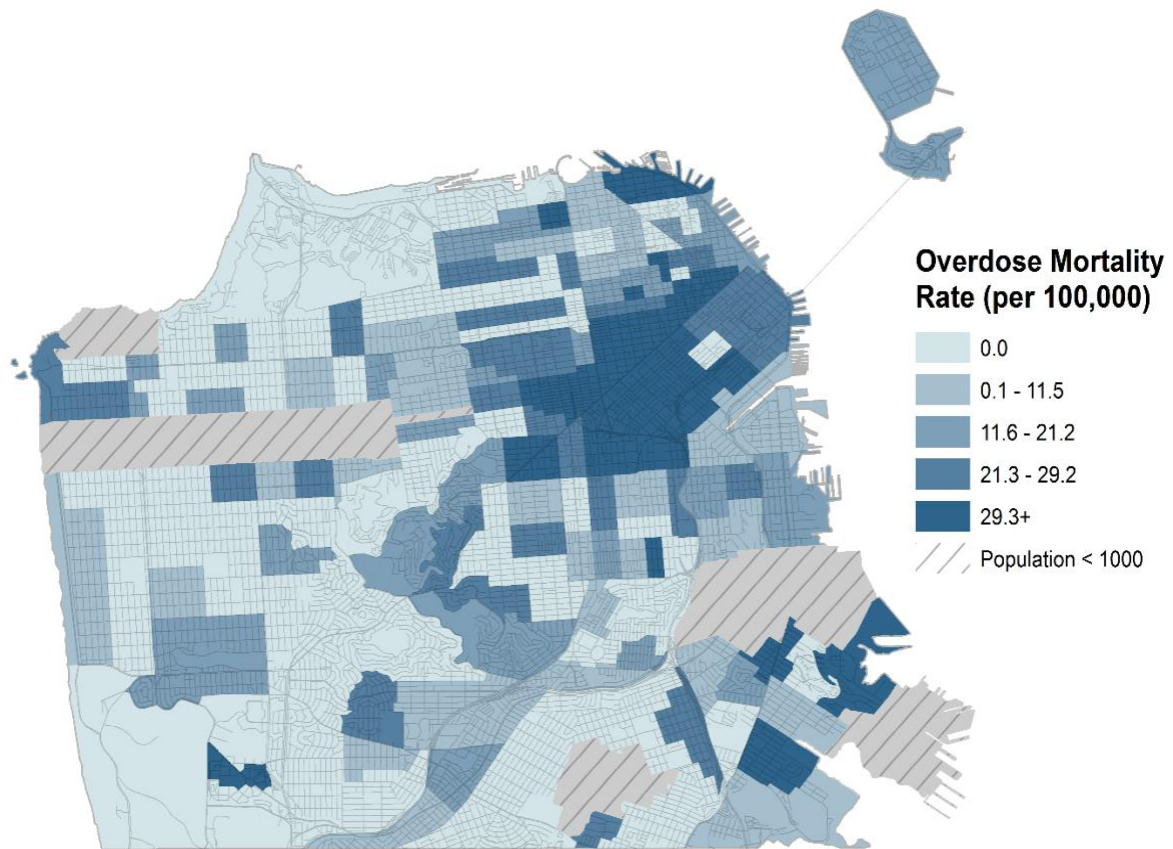


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Drug overdose mortality tends to be concentrated in the Tenderloin, South of Market, and Mission neighborhoods of San Francisco (**Figure 3**). The map displayed includes all opioid, cocaine, and methamphetamine overdose deaths that occurred in San Francisco in 2016 and 2017 (the most recent years for which geocoding is currently available) by location of death, excluding the 64 (16%) that occurred in hospitals.

Figure 3: Annualized Rate of Opioids, Cocaine, or Methamphetamine Overdose Deaths by Census Tract in CCSF, 2016 and 2017

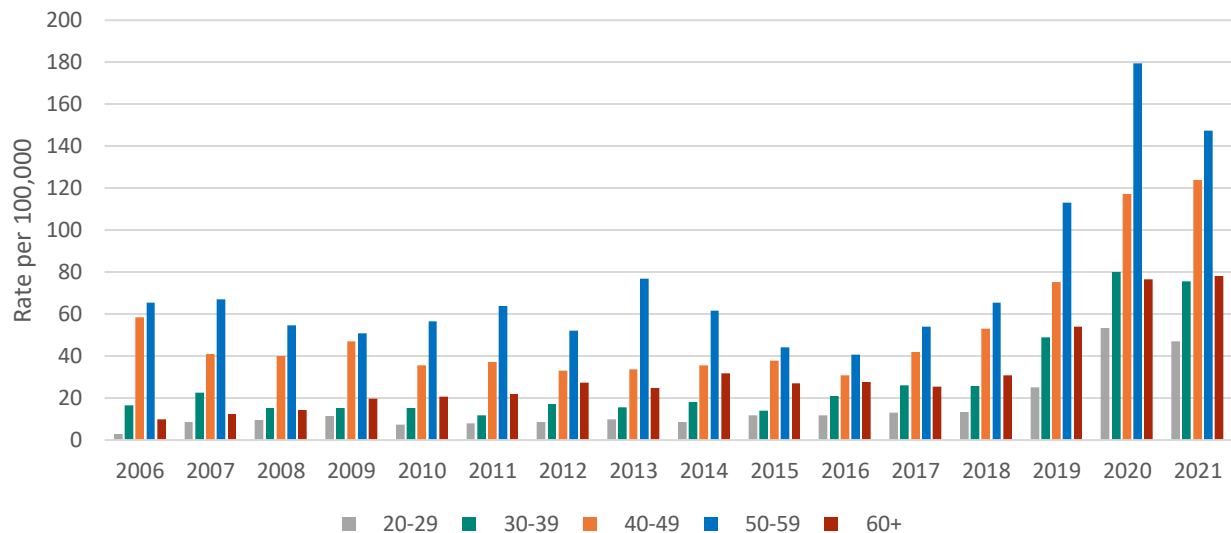


Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded, as were the 16% of deaths that occurred in a hospital. Rate is annualized and calculated as dividing the two-year rates by two. Census tracts with populations under 1,000 were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Census tract population denominators taken from U.S. Census Bureau, 2013-2017 American Community Survey 5-year Population Estimates.

In 2021, the rate of overdose deaths was highest among people aged 50-59 years (**Figure 11**), males (**Figure 12**), and among Black/African Americans (**Figure 13**). The rate of overdose death rose from 2020 to 2021 among people aged 40-49 (**Figure 11**). There has been an approximately 5-fold disparity in the rate of overdose death among Black/African Americans compared to all race/ethnicities throughout the period of 2006-2021 (**Figure 116**).

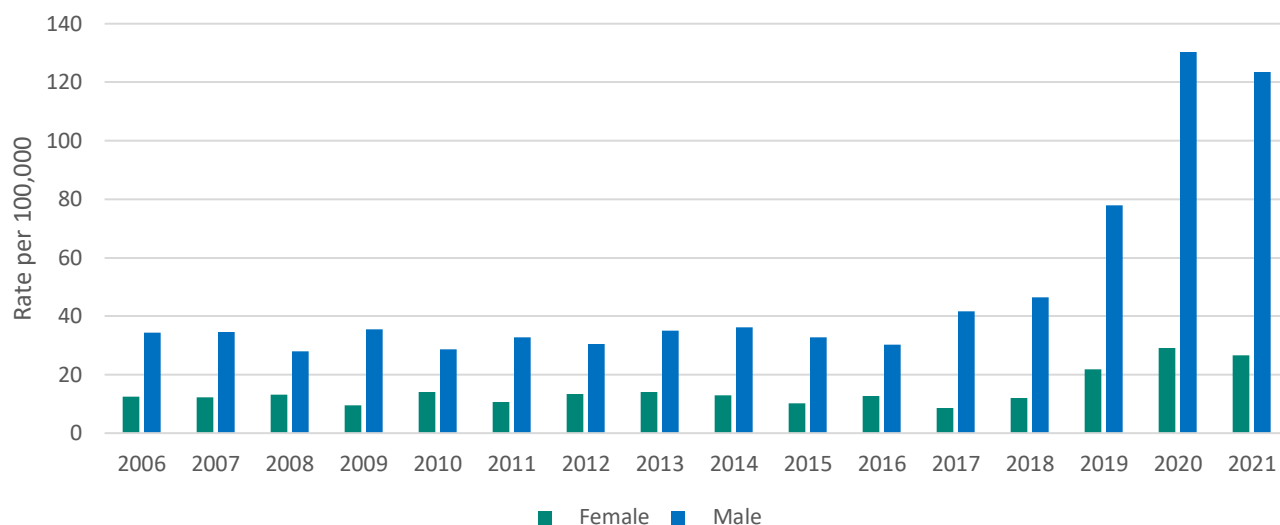
Figure 4: Rate of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Age Category in CCSF, 2006-2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

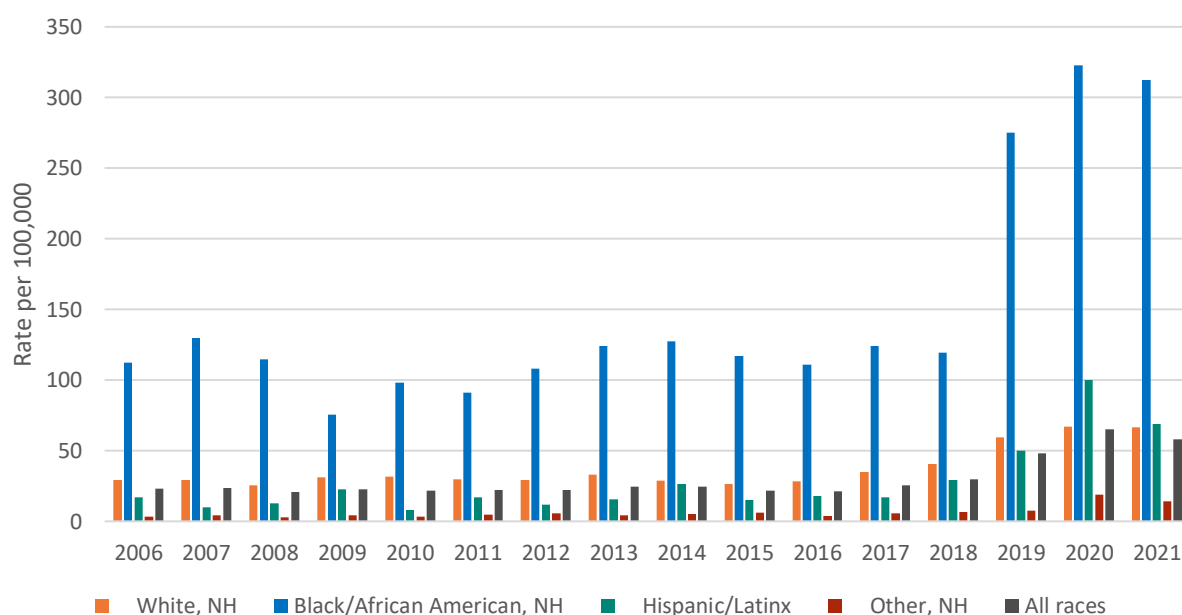
Figure 5: Rate of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Sex in CCSF, 2006–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 6: Rate of Opioid, Cocaine, and Methamphetamine Overdose Deaths by Race/Ethnicity in CCSF, 2006–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

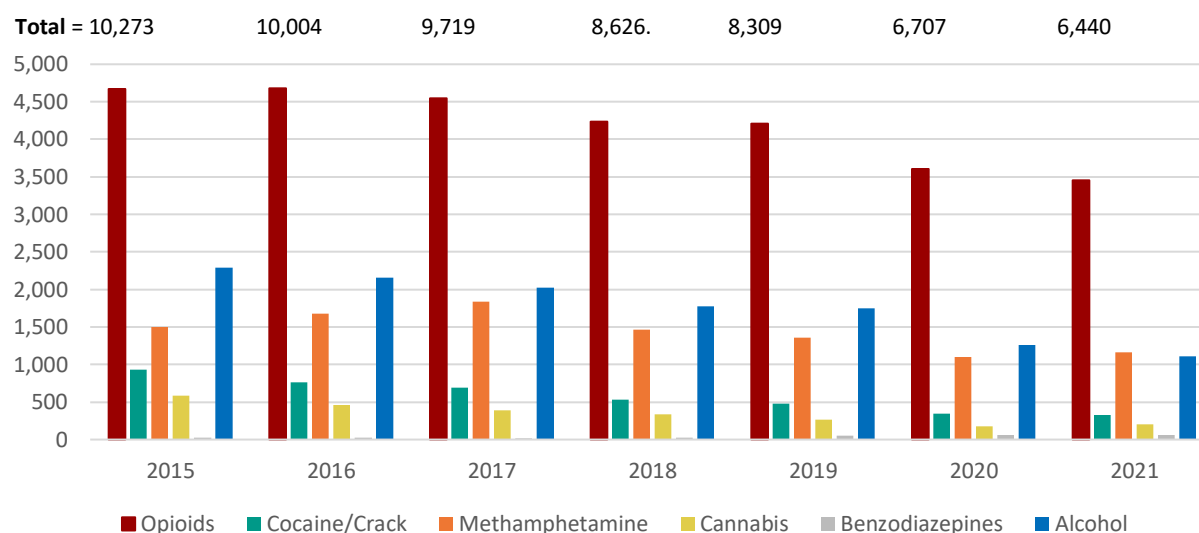
Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

3.2 OVERALL SUBSTANCE USE DISORDER TREATMENT PROGRAM ADMISSIONS

The number of admissions to specialty programs treating substance use disorders (SUDs) in San Francisco declined from 10,273 in 2015 to 6,440 in 2021 (**Figure 7**; data include publicly funded and methadone maintenance treatment services, excluding Veterans Administration). The number of unique persons served also declined from 6,910 in 2015 to 4,341 in 2021. While the decline in 2020 can be attributed to the COVID-19 pandemic, the overall trend may be due to:

- The number of people treated each year with buprenorphine outside of SUD treatment programs rose from 1,627 in 2015 to 3,182 in 2021; this increase exceeds the reduction in unique persons treated in SUD programs for any opioids from 3,640 in 2015 to 2,689 in 2021, suggesting an overall increase in SUD care for people who use opioids.
- Use of alcohol use disorder medications outside of SUD treatment has likely increased.
- Under the Drug Medi-Cal Organized Delivery System (DMC-ODS), which began in CCSF in 2017, each county provides services for beneficiaries residing in that county. Previously, CCSF served many persons whose primary residence was another county.
- Data on hospitalizations and ED visits suggest heightened acuity of SUDs, which could create a barrier to accessing SUD treatment triage services, including those that are fairly low-threshold.
- Homelessness has a complex effect, acting as a barrier to some SUD treatment services, while new housing services provide opportunities to develop novel approaches to SUD treatment service delivery.

Figure 7: Number of Admissions to Programs Treating Substance Use Disorders by Primary Substance in CCSF, 2015–2021



Admissions: Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission does not necessarily represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

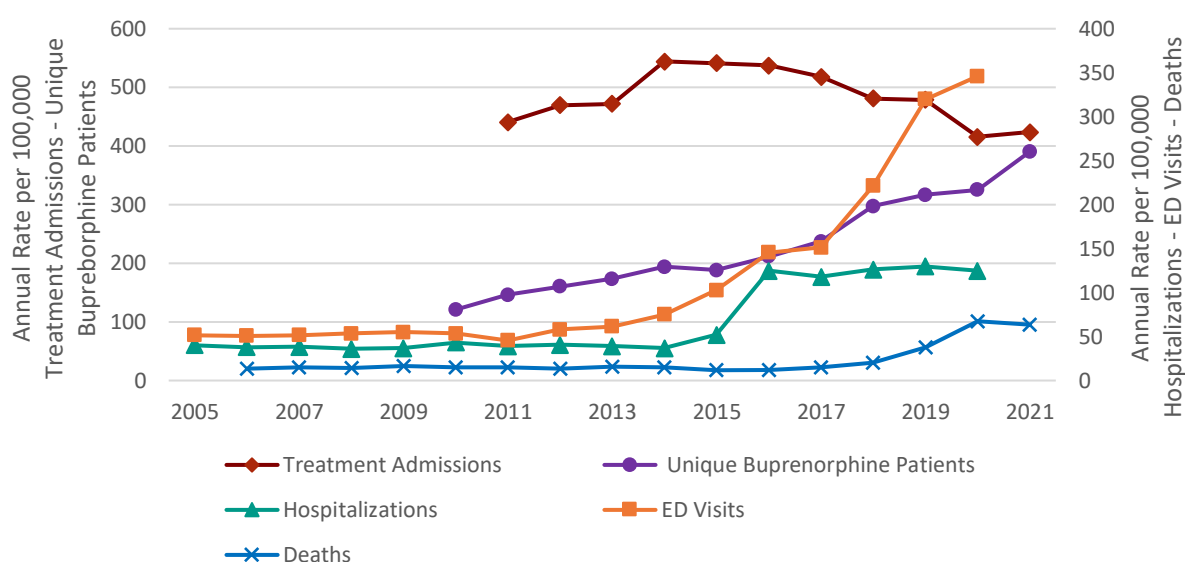
4 SUBSTANCE USE INDICATORS, BY SUBSTANCE

4.1 OPIOIDS

4.1.1 Any Opioids

Opioid use indicators in San Francisco demonstrate persistent morbidity and mortality, although the rate of overdose deaths declined in 2021 (**Figure 8**). Treatment admissions for any opioid and the number of persons prescribed buprenorphine increased in 2021. Emergency department visits increased while hospitalization remained stable from 2018 to 2020.

Figure 8: Rate of Opioid Use Health Indicators in CCSF, 2005–2021

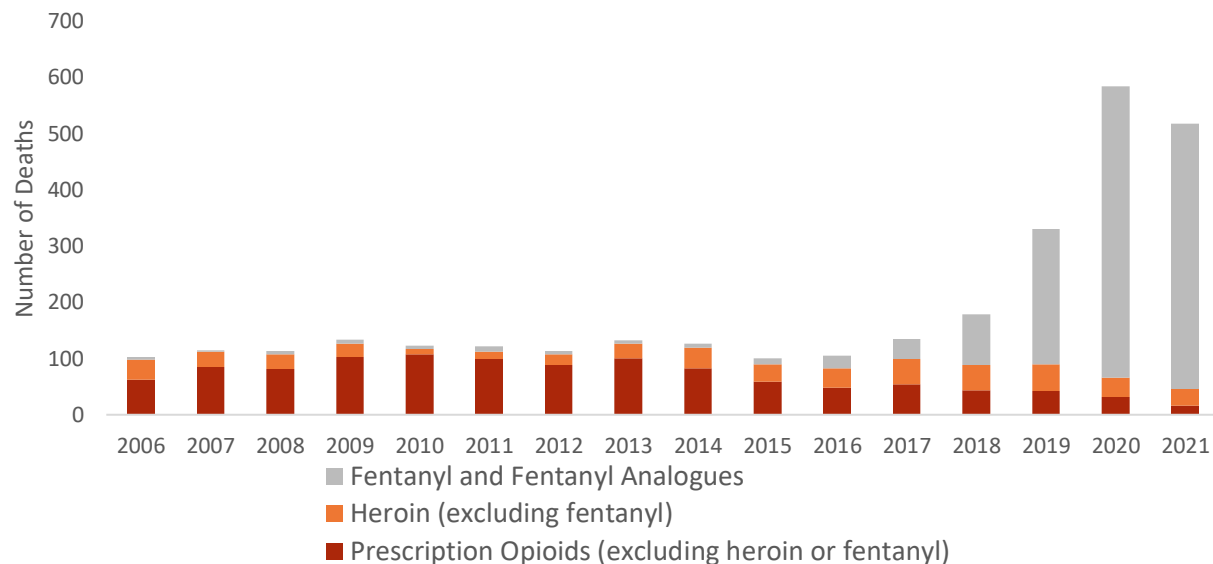


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E850.0, E850.1, E850.2, 965.0 (poisoning) and ICD-10 codes: T40.0, T40.1, T40.2, T40.3, T40.4, T40.6 (poisoning); as well as primary only ICD-9 codes: 304.0 (dependence), 304.7 (dependence), 305.5 (abuse) and ICD-10 code: F11 (dependence/abuse/use). For ICD-10 codes T40.0, T40.1, T40.2, T40.3, T40.4, T40.6, codes with a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Buprenorphine prescriptions: Data were provided by California Controlled Substance Utilization Review and Evaluation System (CURES 2.0) and include all buprenorphine prescriptions issued outside of SUD treatment programs. Treatment admissions were provided by Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

The number of opioid overdose deaths, driven by fentanyl, declined in 2021. Deaths from heroin (excluding fentanyl) and prescription opioids (excluding fentanyl and heroin) have declined since 2017 (**Figure 9**).

Figure 9: Number of Opioid Overdose Deaths by Mutually Exclusive Opioid Type in CCSF, 2006–2021

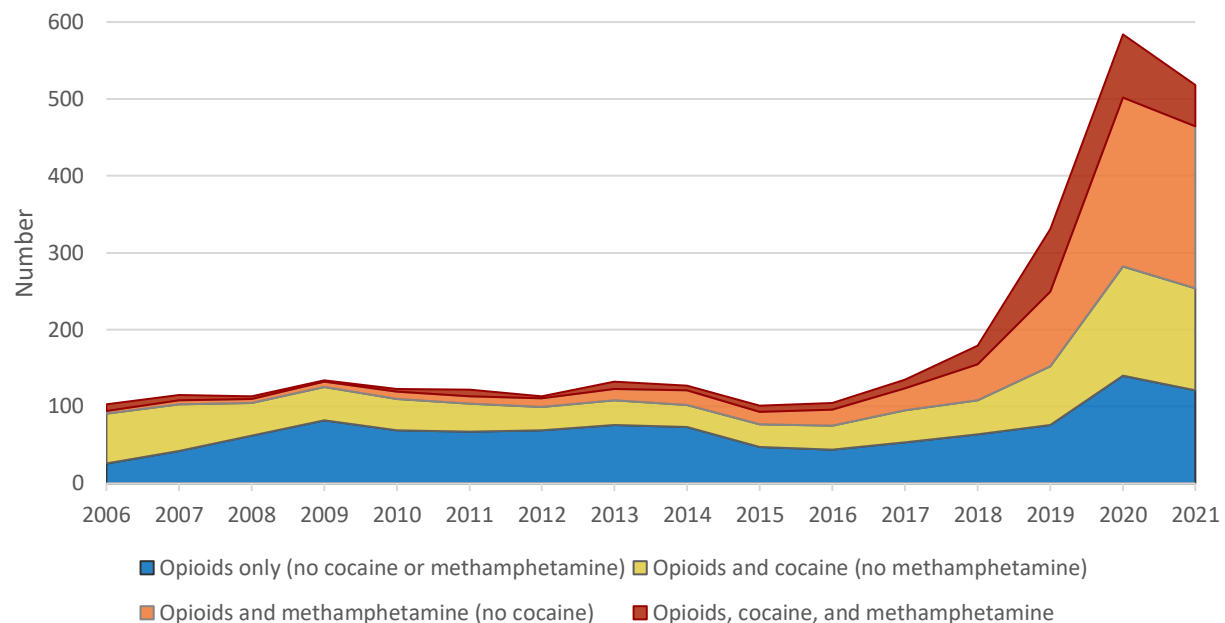


Overdose deaths were identified use textual cause of death fields. Homicides and suicides were excluded. Fentanyl overdose death was defined as any death caused by fentanyl; heroin overdose death was defined as any death caused by heroin but not fentanyl; prescription opioid overdose death was defined as all opioid overdose deaths not also caused by heroin or fentanyl. Fentanyl includes fentanyl analogues.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Overdose deaths due to opioids only, as well as in combination with stimulants, decreased in 2021 (**Figure 10**).

Figure 10: Number of Opioid Overdose Deaths by Mutually Exclusive Involvement of Cocaine or Methamphetamine in CCSF, 2006–2021

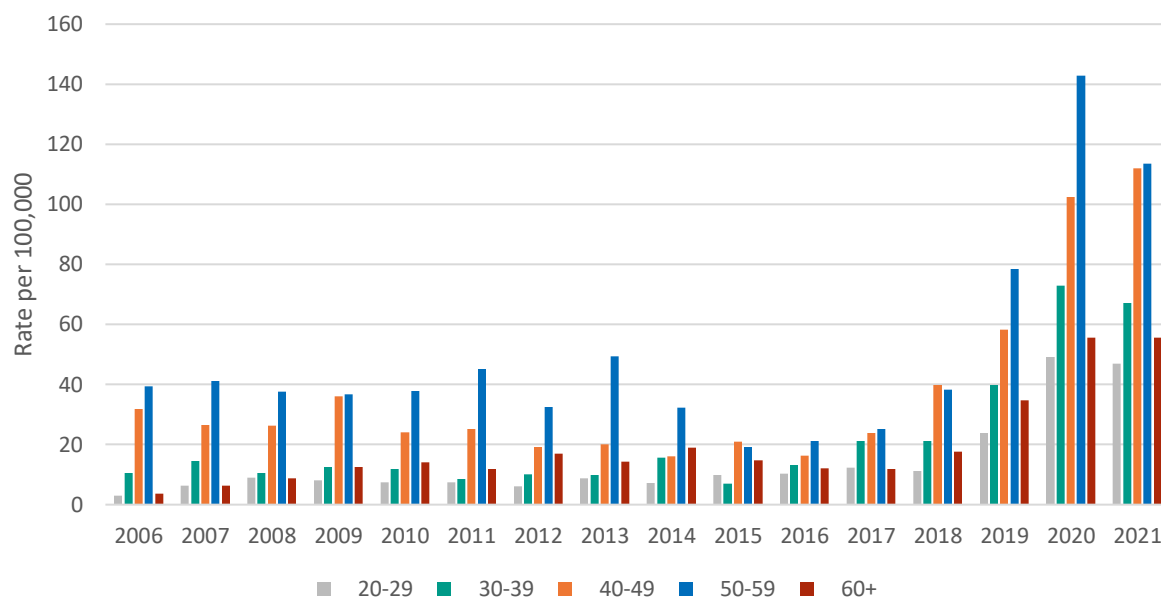


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

In 2021, the rate of opioid overdose deaths was highest among people aged 50-59 years (**Figure 11**), males (**Figure 12**), and among Black/African Americans (**Figure 13**). The rate of opioid overdose death rose from 2020 to 2021 among people aged 40-49 (**Figure 11**), White Non-Hispanics, and Black/African American Non-Hispanics (**Figure 13**).

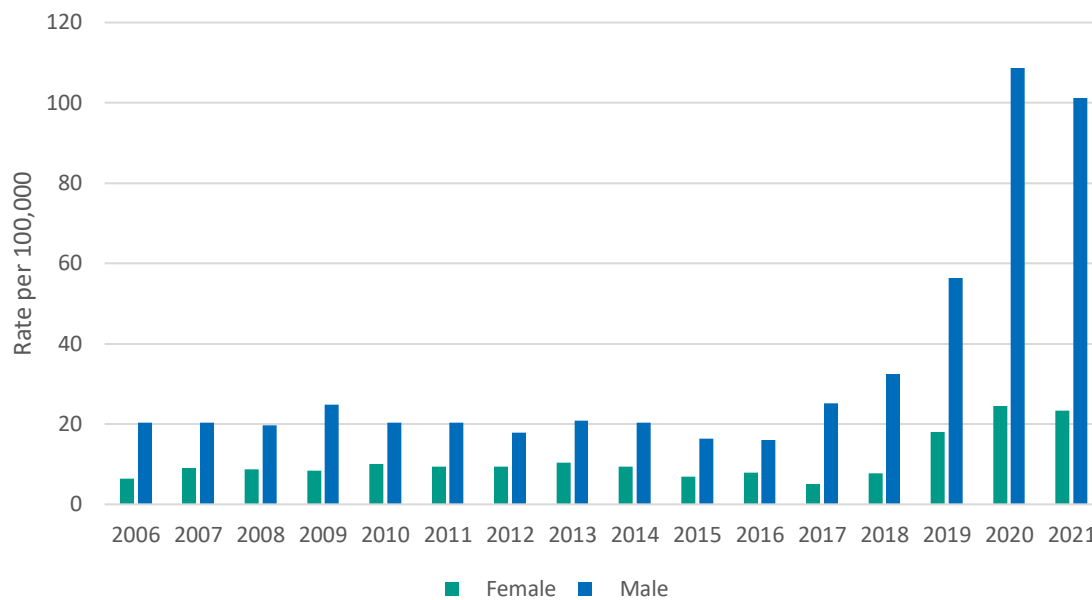
Figure 11: Rate of Opioid Overdose Deaths by Age Category in CCSF, 2006–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

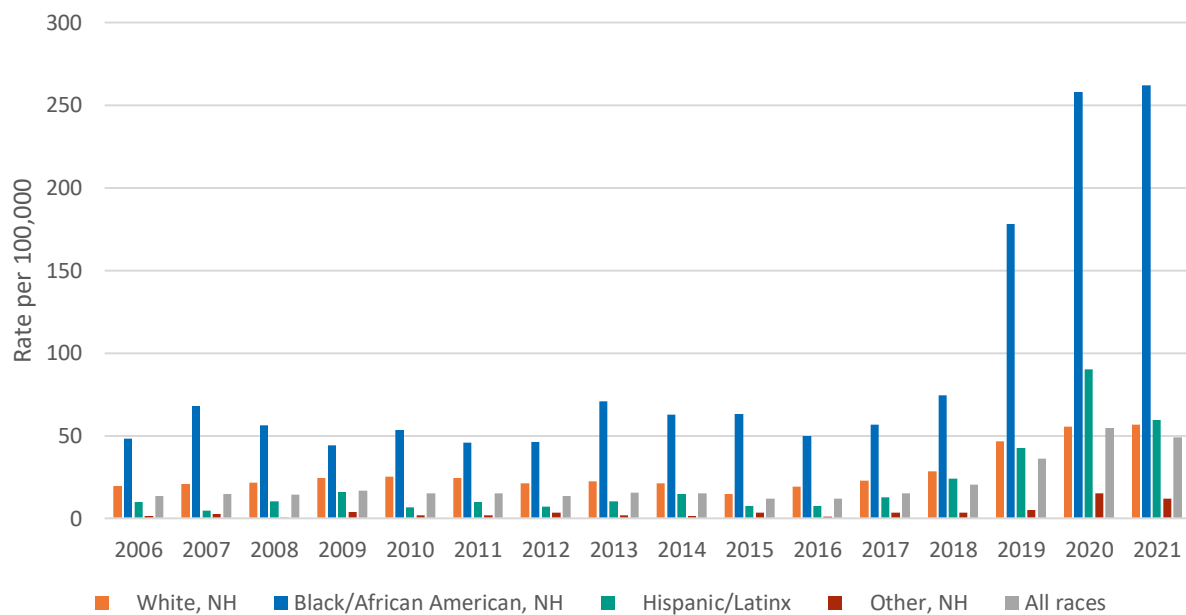
Figure 12: Rate of Opioid Overdose Deaths by Sex in CCSF, 2006–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 13: Rate of Opioid Overdose Deaths by Race/Ethnicity in CCSF, 2006–2021



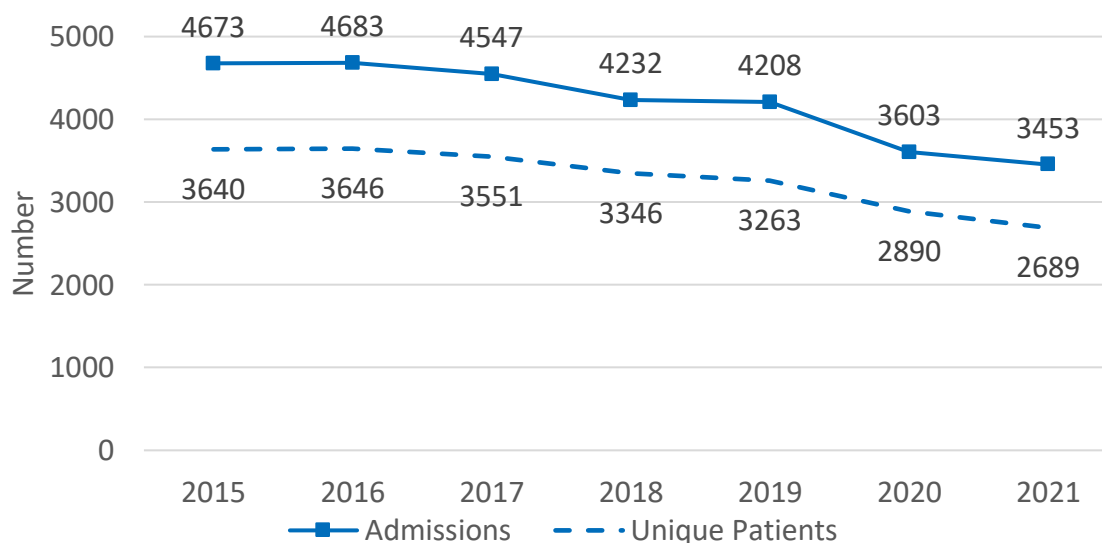
Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

SUD treatment admissions and unique patients admitted for all opioids declined by approximately 26% between 2015 and 2021 (**Figure 14**). Although not shown in these data, the number of unique individuals who received SUD treatment for opioids in San Francisco likely increased overall as a result of the substantial increase in the number of unique individuals who received buprenorphine outside of SUD treatment programs between 2015 and 2020 (see **Figure 38**).

The rate of SUD treatment admissions for opioids was highest among males (**Figure 15a**), people aged 50-59 years (**Figure 15b**), and Black/African Americans (**Figure 16**).

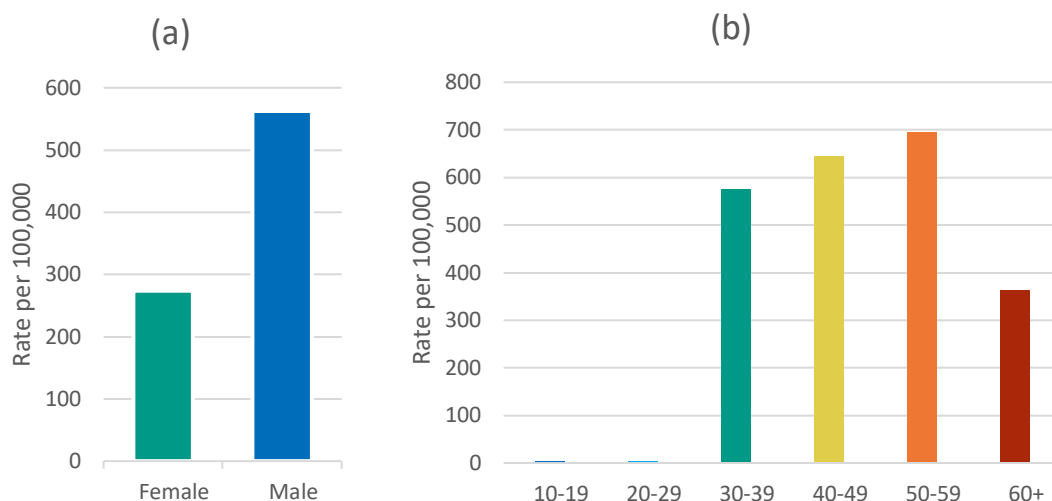
Figure 14: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for All Opioids as the Primary Substance in CCSF, 2015–2021



Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

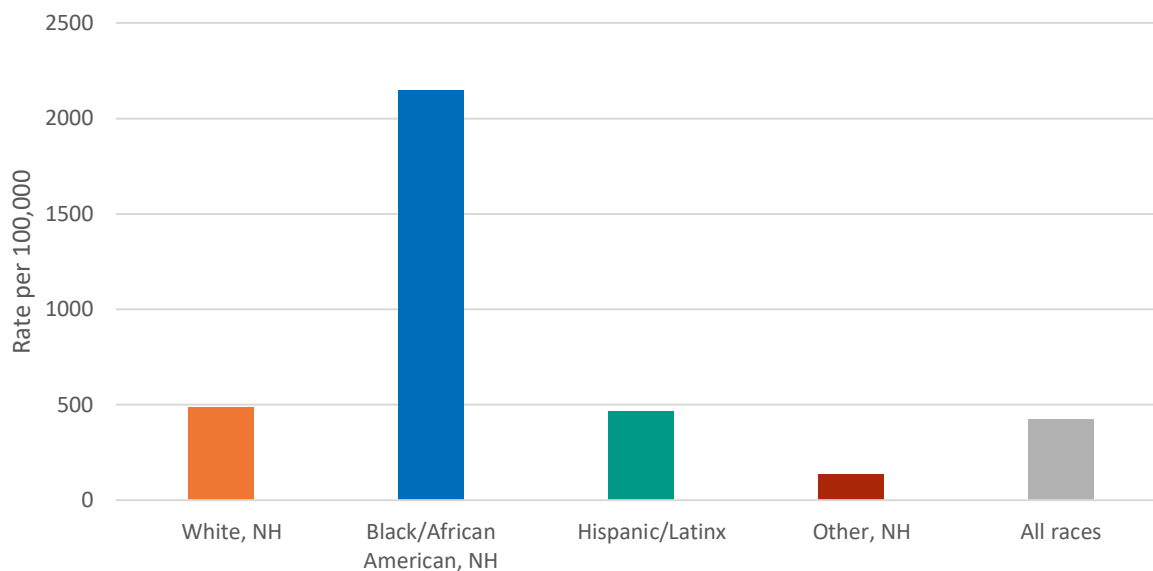
Figure 15: Rate of Admissions to Programs Treating Substance Use Disorders for Any Opioids by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for heroin among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 16: Rate of Admissions to Programs Treating Substance Use Disorders for Any Opioids by Race/Ethnicity in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

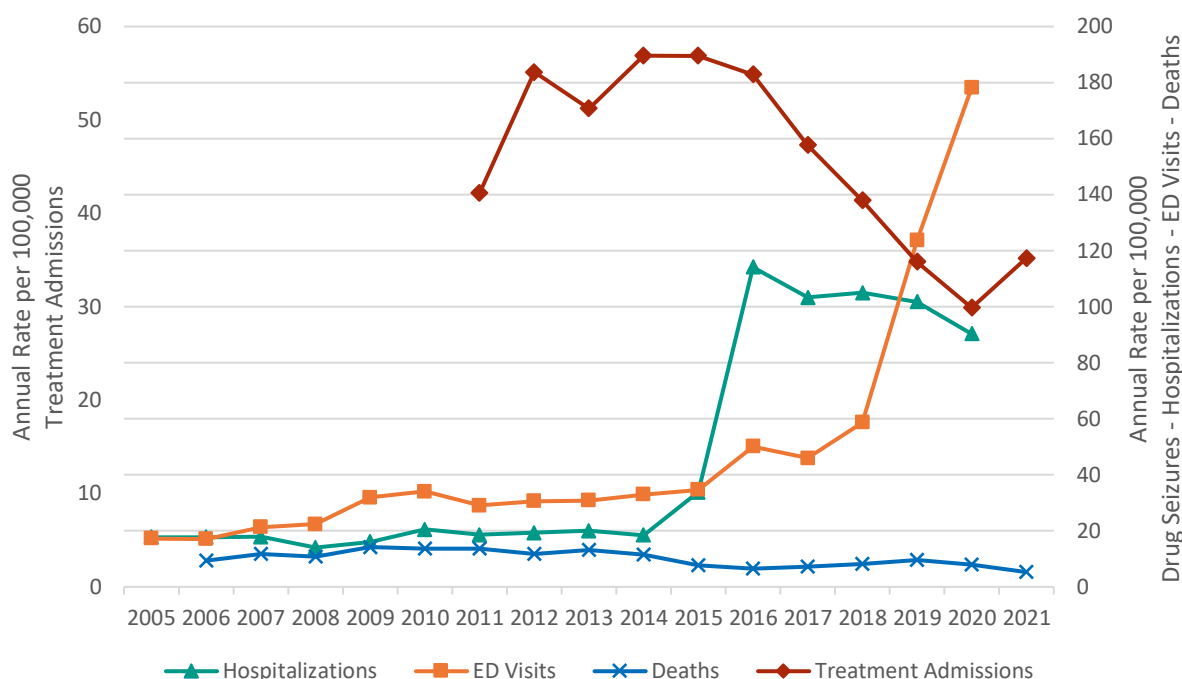
4.1.2 Prescription Opioids

Prescription opioids include opioids prescribed for pain or opioid use disorder treatment, such as oxycodone, hydrocodone, oxymorphone, hydromorphone, methadone, and morphine. For the purpose of this report, prescription opioids do not include heroin or fentanyl, the latter of which, since 2015, has been mostly illicitly-manufactured when involved in overdose deaths.

Indicators for prescription opioids suggest stable impact on the community. The rate of overdose death due to prescription opioids decreased after it peaked in 2009. While prescription opioid overdose deaths appear fairly stable since 2016 (**Figure 17**), the number of prescription opioid overdose deaths without heroin or fentanyl has actually continued to decline, to a nadir of 16 deaths in 2021 (**Figure 9**). The sharp increase in both emergency department visits and hospitalizations involving prescription opioids from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Due to lack of specificity in opioid-specific ICD coding, the emergency department visits include only acute poisoning (in contrast, the overall opioid measures (**Section 4.1.1**) include use/dependence/abuse codes).

Among the 43 overdose deaths caused by prescription opioids in 2021 21% were exclusive to prescription opioids (meaning they did not involve heroin, fentanyl, cocaine, methamphetamine, or benzodiazepines), 56% involved fentanyl, 23% involved heroin, 35% involved cocaine/crack, 30% involved methamphetamine, and 7% involved a benzodiazepine.

Figure 17: Rate of Prescription Opioid Health Indicators in CCSF, 2005–2021

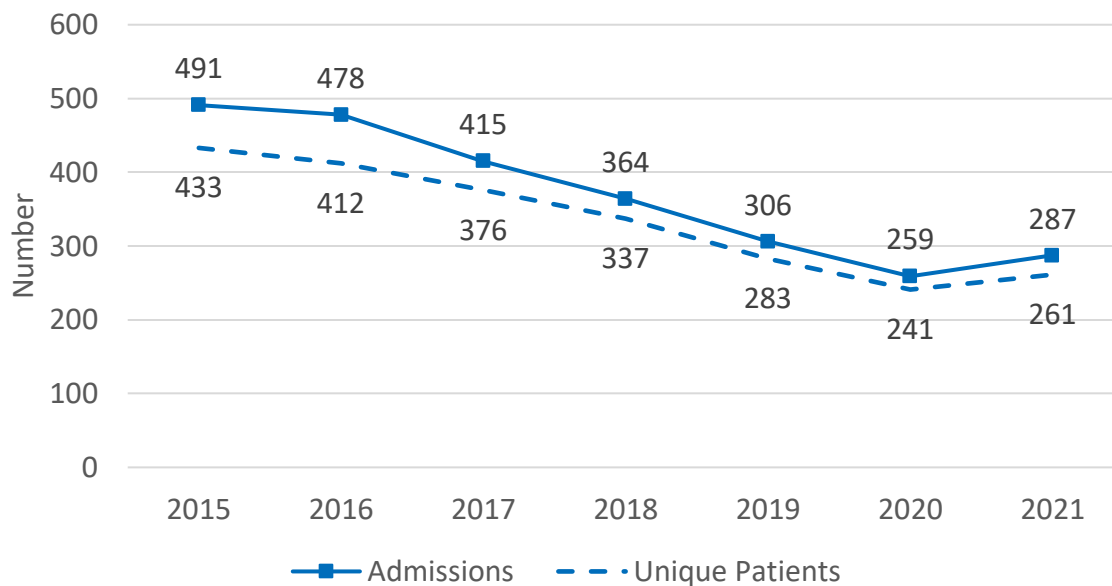


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E850.1, E850.2, 965.00, 965.02, 965.09 (poisoning) and ICD-10 codes: T40.0, T40.2, T40.3, T40.6 (poisoning). For ICD-10 codes T40.0, T40.2, T40.3, T40.6, codes with a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Prescription opioids accounted for 287 (4.5%) of all SUD treatment admissions in 2021. The number of admissions and unique patients increased in 2021 (**Figure 18**). The rate of SUD treatment admissions for prescription opioids was highest among males (**Figure 19a**), people aged 30-39 years (**Figure 19b**), and Black/African Americans (**Figure 20**). Over 65% of the admissions reported using prescription opioids orally (**Figure 21**). The most common secondary substances were methamphetamine (22%), cocaine/crack (11%), and heroin (9%).

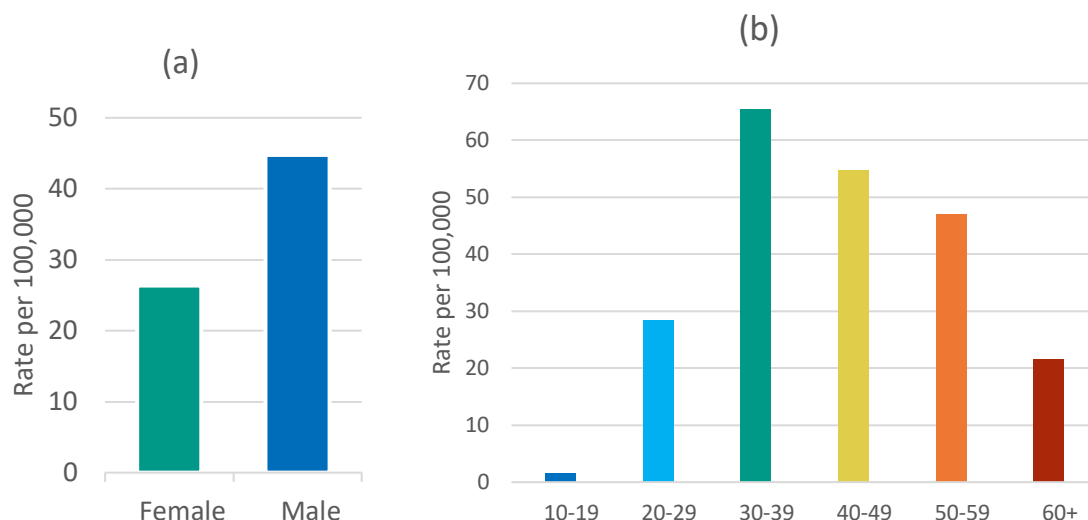
Figure 18: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Prescription Opioids as the Primary Substance in CCSF, 2015-2021



Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. Admissions for fentanyl are presented separately.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

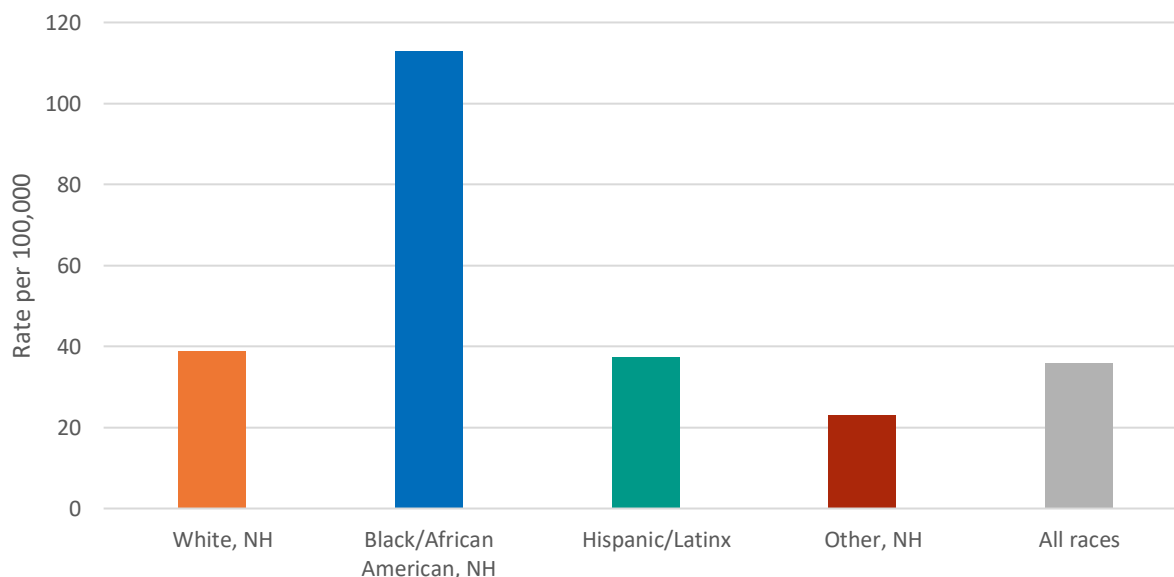
Figure 19: Rate of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for prescription opioids among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

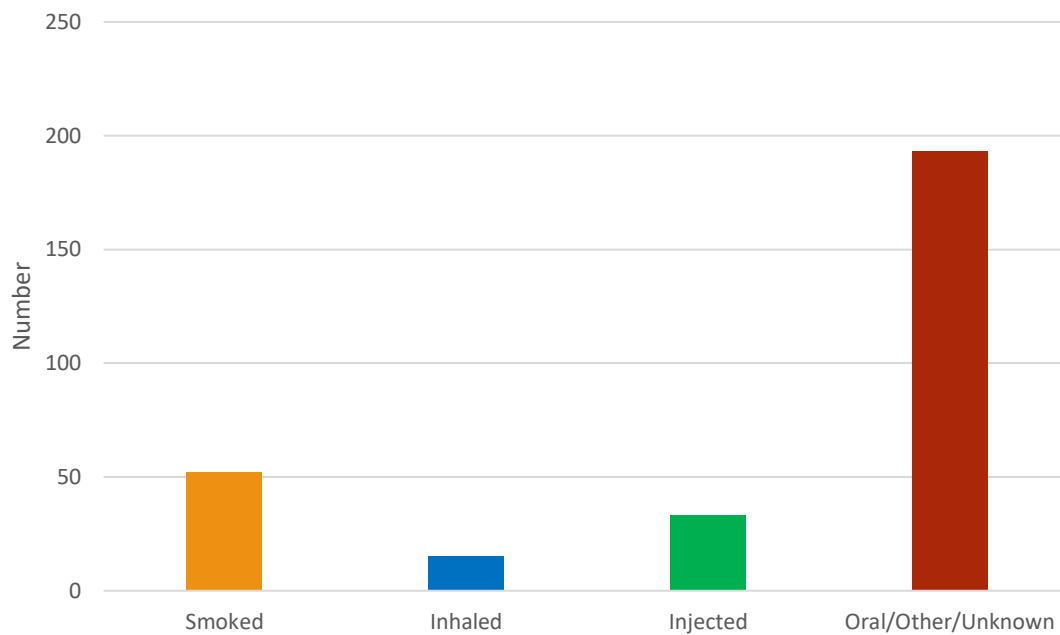
Figure 20: Rate of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids by Race/Ethnicity in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 21: Number of Admissions to Programs Treating Substance Use Disorders for Prescription Opioids Use by Route of Administration in CCSF, 2021

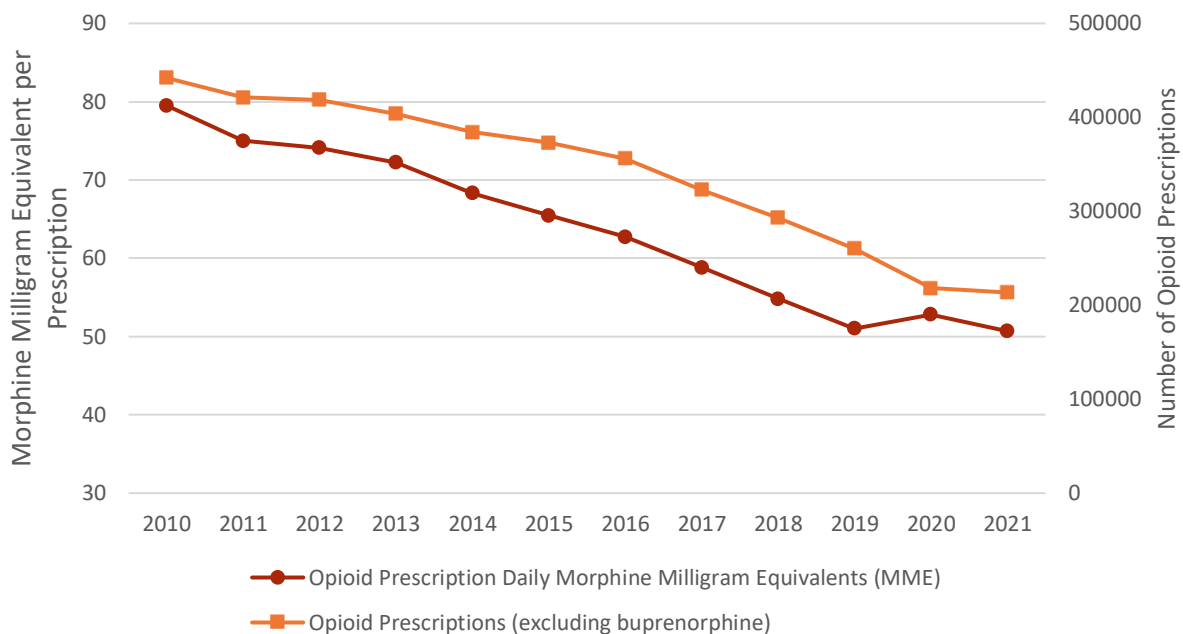


Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Since 2010, the number of opioid prescriptions (excluding buprenorphine) dispensed by pharmacies in San Francisco has decreased by 52% and the daily morphine milligram equivalent (MME; excluding buprenorphine) in each prescription issued has declined by 36% (**Figure 22**). There was a slight increase in MME per prescription in 2020, likely due to COVID-19 pandemic restrictions limiting in-person clinical care.

Figure 22: Number of Opioid Prescriptions and Daily MMEs per Opioid Prescription in CCSF, 2010–2021



Data exclude prescriptions for buprenorphine.

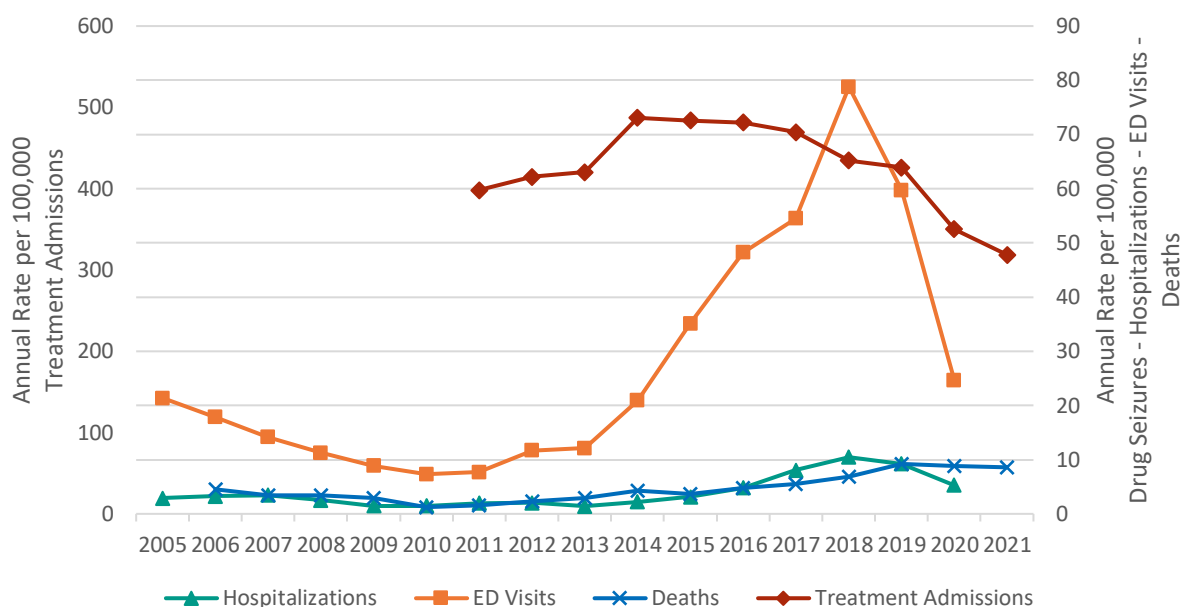
Source: California Controlled Substance Utilization Review and Evaluation System (CURES 2.0).

4.1.3 Heroin

Most indicators suggest a recent reduction in heroin-related morbidity in San Francisco (**Figure 23**). The rate of overdose death due to heroin increased from 1.2 deaths per 100,000 CCSF population at its lowest in 2010 to a recent peak of 9.2 in 2019 and then declined slightly to 8.6 in 2021, although most of these recent heroin deaths occurred in combination with fentanyl (see **Figure 9**). While the rate of specialty SUD treatment admissions for heroin decreased, both the rate and number of unique patients treated with buprenorphine increased in 2021 (see **Figure 38**), consistent with an overall increase in the number of people treated annually for opioid use disorder. Heroin-related ED visits and hospitalizations have declined in recent years.

Among the 70 overdose deaths caused by heroin in 2021, 11% were exclusive to heroin, (meaning they did not involve prescription opioids, fentanyl, cocaine, methamphetamine, or benzodiazepines), 57% involved fentanyl, 14% involved prescription opioids, 41% involved cocaine, 50% involved methamphetamine, and 6% involved benzodiazepines. There were 30 deaths due to heroin in the absence of fentanyl in 2021.

Figure 23: Rate of Heroin Health Indicators in CCSF, 2005–2021



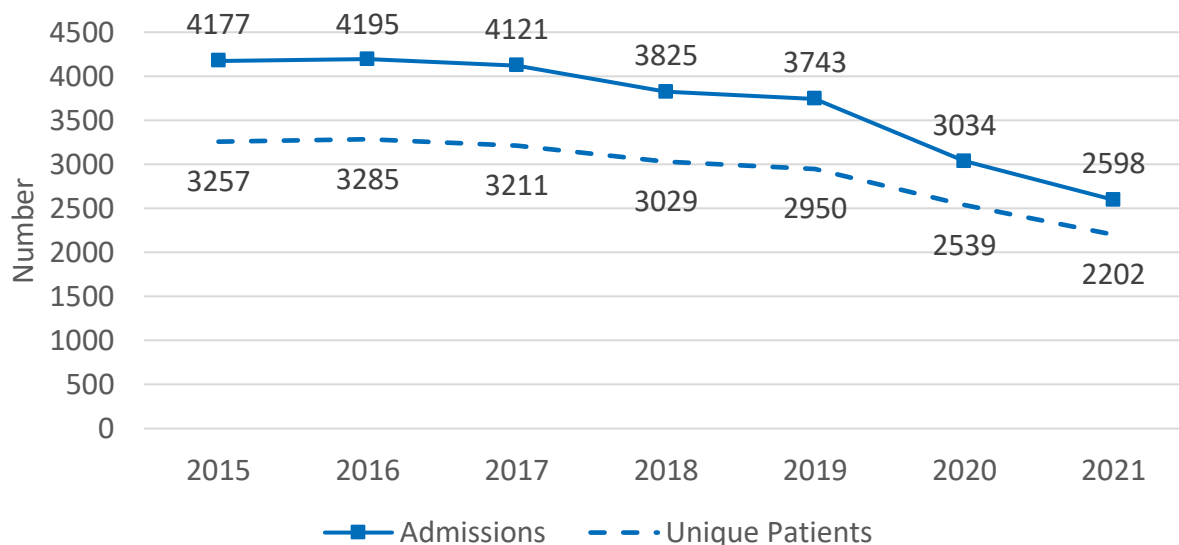
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E850.0 (poisoning), 965.01 (poisoning) and ICD-10 code: T40.1 (poisoning). Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Both the number of SUD treatment admissions and the number of unique persons admitted for heroin treatment have declined since 2016. However, the increase in buprenorphine treatment for opioid use disorder outside of the specialty SUD treatment system suggests an increase in the number of people receiving treatment each year (see **Section 3.2**). In addition, the decline specific to heroin is partially offset by the increasing utilization of SUD treatment for fentanyl.

The number of SUD treatment admissions for heroin as the primary drug decreased between 2020 and 2021 (**Figure 24**) and was the most common drug for SUD treatment, accounting for 40% of all admissions. The rate of SUD treatment admissions for heroin was highest among males (**Figure 25a**), people aged 50-59 years (**Figure 25b**), and Black/African Americans (**Figure 26**). The most common route of administration was injection (56%; **Figure 27**) and the most common secondary substances were methamphetamine (28%) and cocaine/crack (25%).

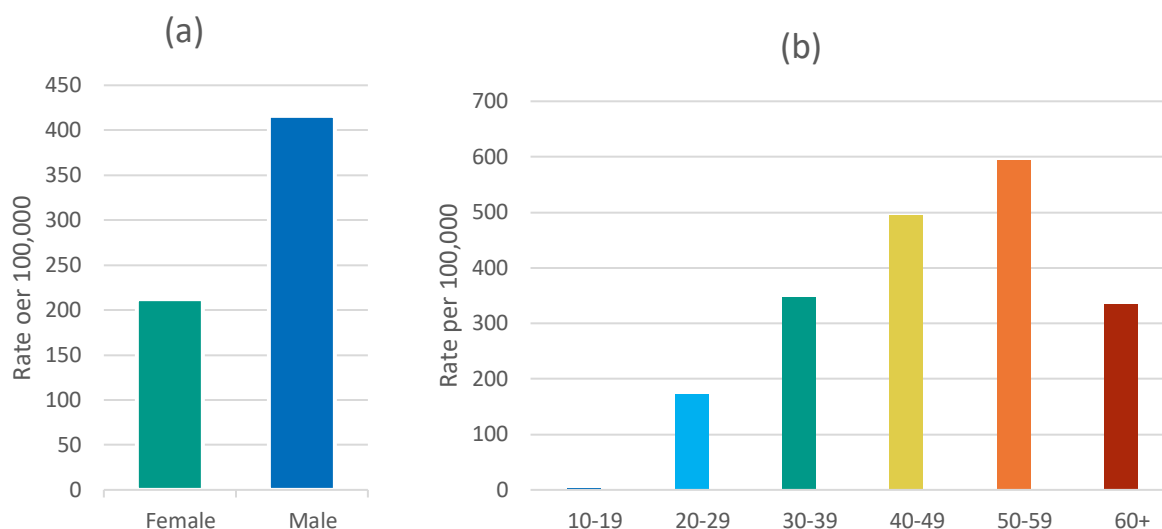
Figure 24: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Heroin as the Primary Substance in CCSF, 2015–2021



Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

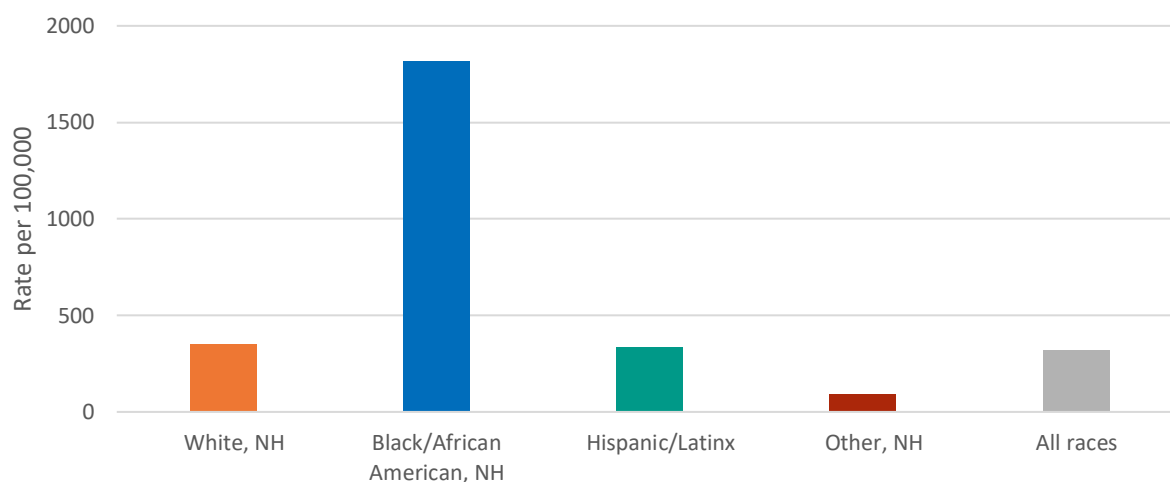
Figure 25: Rate of Admissions to Programs Treating Substance Use Disorders for Heroin by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for heroin among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services.

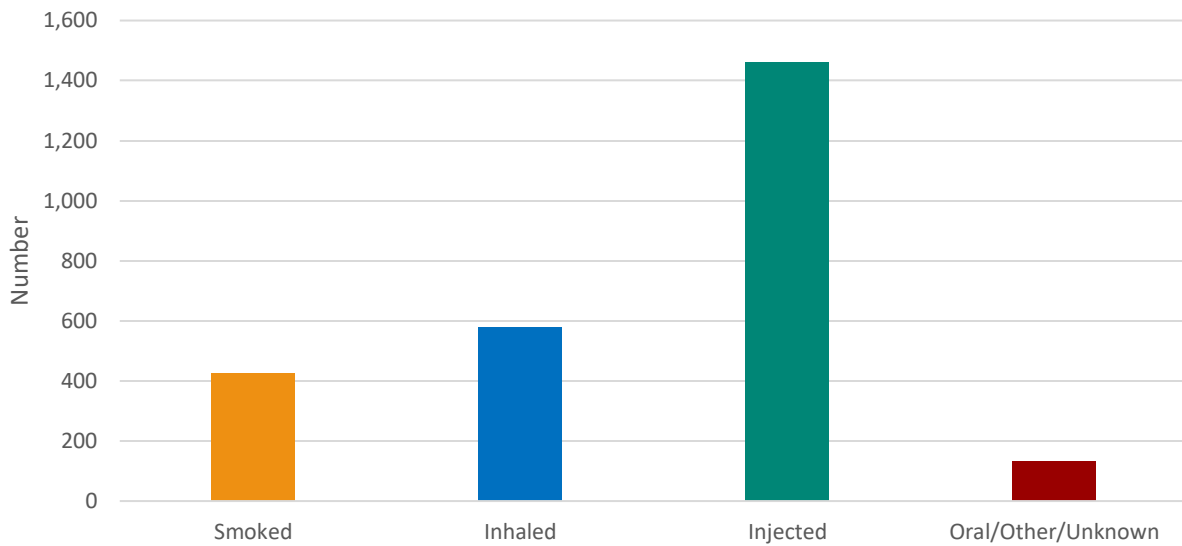
Figure 26: Rate of Admissions to Programs Treating Substance Use Disorders for Heroin by Race/Ethnicity in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 27: Number of Admissions to Programs Treating Substance Use Disorders for Heroin by Route of Administration in CCSF, 2021



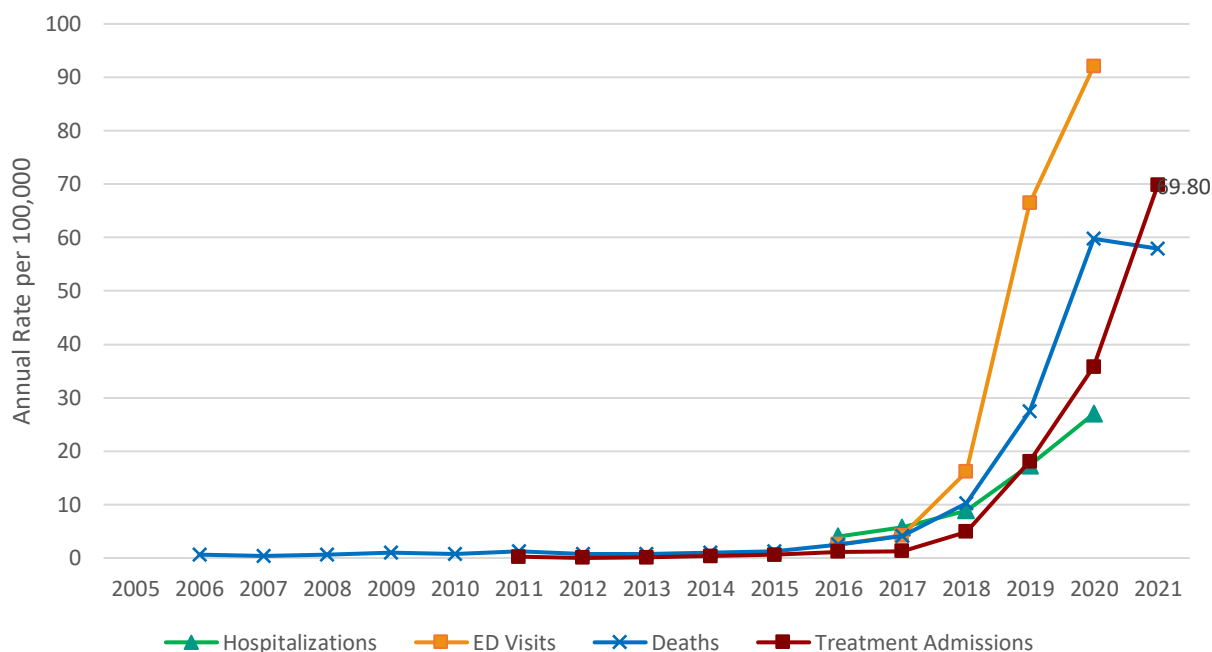
Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

4.1.4 Fentanyl

Fentanyl (including common analogues such as acetyl fentanyl) has impacted San Francisco substantially (**Figure 28**). The rate of fentanyl overdose deaths began increasing in 2016, accelerated through 2020, and decreased in 2021. Among the 472 fentanyl-related overdose deaths in 2021, 18% were exclusive to fentanyl (meaning they did not involve prescription opioids, heroin, cocaine, methamphetamine, or benzodiazepines), 8% involved heroin, 5% involved prescription opioids, 36% involved cocaine, 53% involved methamphetamine, and 3% involved a benzodiazepine. Fentanyl-related ED visits and hospitalizations, while likely undercounted due to limited availability of fentanyl testing and use of more general billing codes, also sharply increased. Since 2015, there have been scattered reports of counterfeit opioid or benzodiazepine pills, cocaine/crack, and methamphetamine containing fentanyl (see, e.g. www.sfcdcp.org/wp-content/uploads/2021/02/health-alert-fentanyl-overdoses-020521.pdf). Fentanyl is present in many forms, including white powders and “rocks” easily mistaken for methamphetamine, powder cocaine, or crack cocaine. Fentanyl is commonly smoked to allow for dose titration.

Figure 28: Rate of Fentanyl Health Indicators in CCSF, 2006–2021

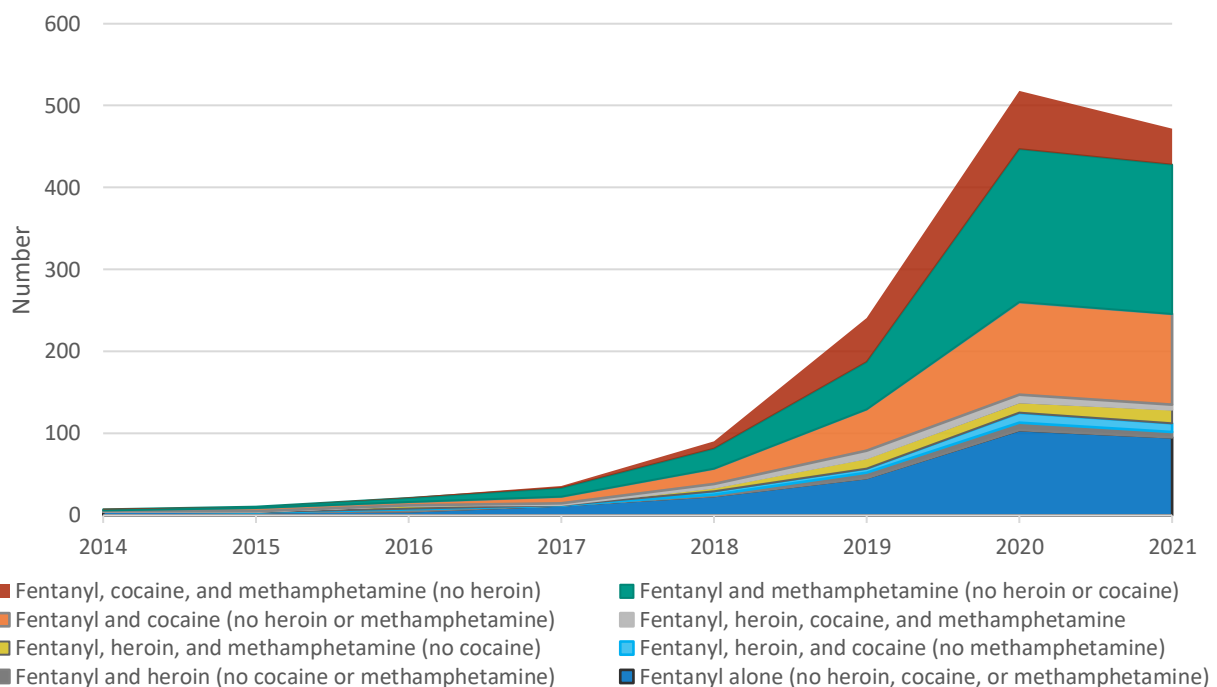


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

From 2006 to 2014, overdose deaths due to fentanyl were low and constant (see **Figure 1**). Since 2016, the number of fentanyl related overdose deaths has risen precipitously. Fentanyl overdose deaths frequently involve cocaine or methamphetamine, while fentanyl deaths involving heroin have been uncommon (**Figure 29**). Fentanyl deaths involving methamphetamine, but not involving cocaine or heroin, have increased more than any other categories, totaling 182 deaths (39% of all fentanyl overdose deaths) in 2021.

Figure 29: Number of Fentanyl Overdose Deaths by Mutually Exclusive Involvement of Additional Causative Substance in CCSF, 2015–2021



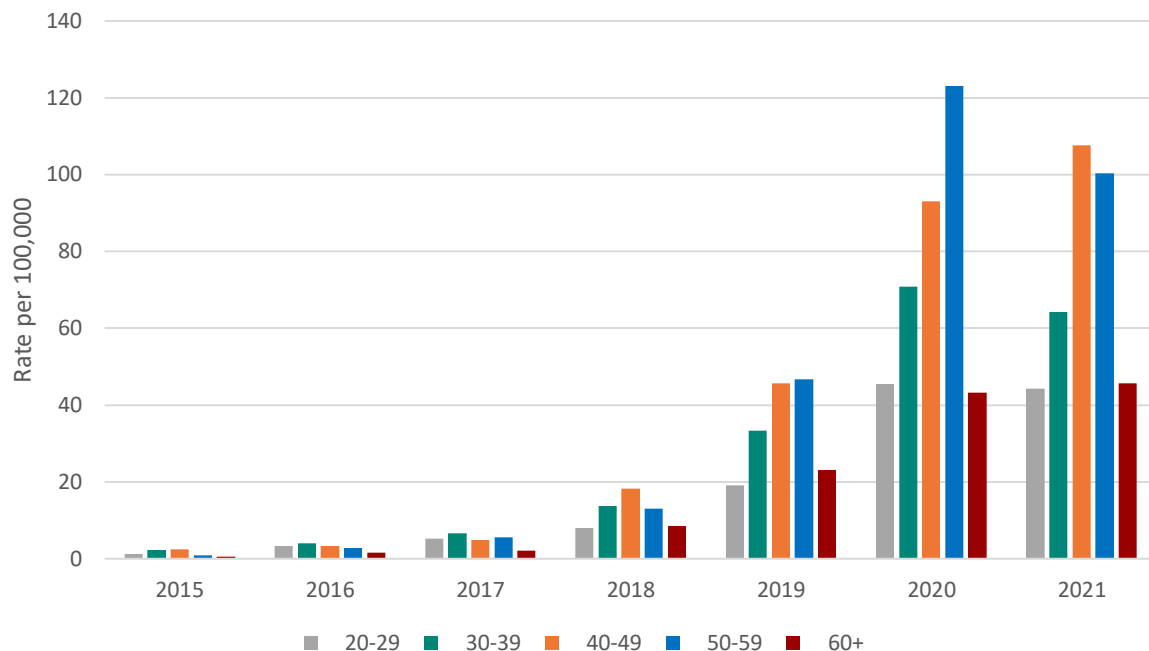
Fentanyl includes fentanyl analogues.

The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

In 2021, the rate of fentanyl overdose deaths was highest among people aged 40-49 years (**Figure 30**), males (**Figure 31**), and among Black/African Americans (**Figure 32**).

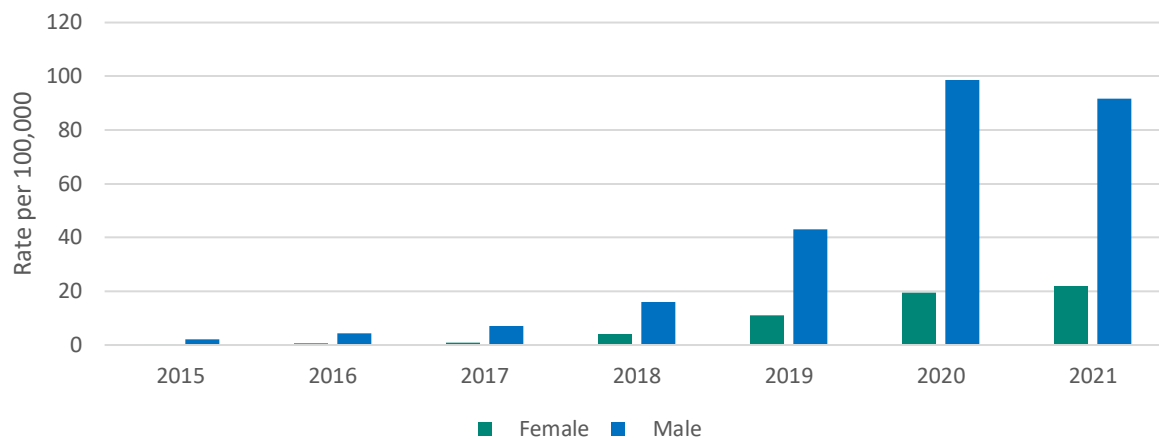
Figure 30: Rate of Fentanyl Overdose Deaths by Age Category in CCSF, 2015–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

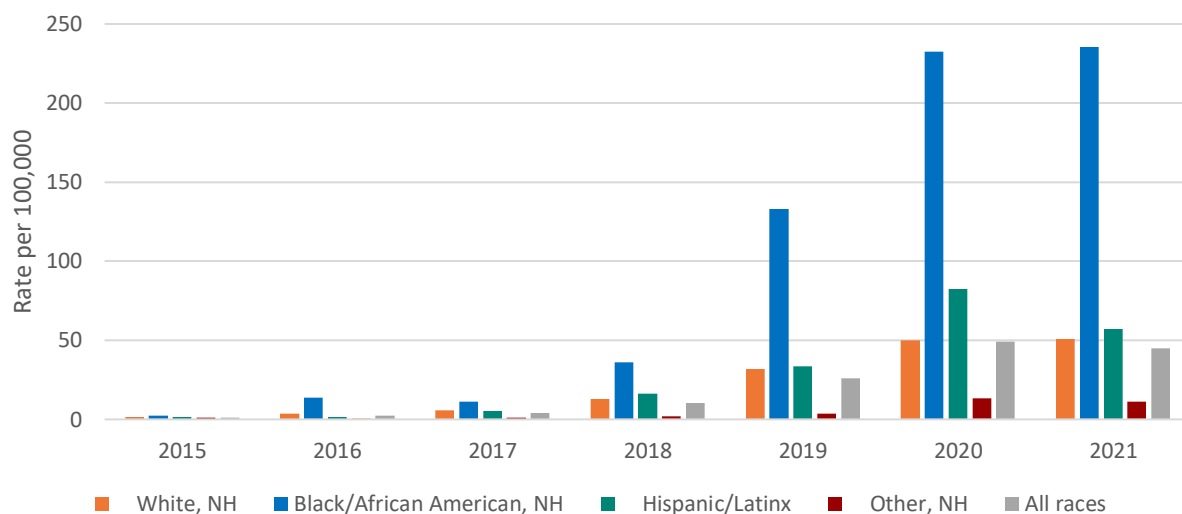
Figure 31: Rate of Fentanyl Overdose Deaths by Sex in CCSF, 2015–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 32: Rate of Fentanyl Overdose Deaths by Race/Ethnicity in CCSF, 2015–2021

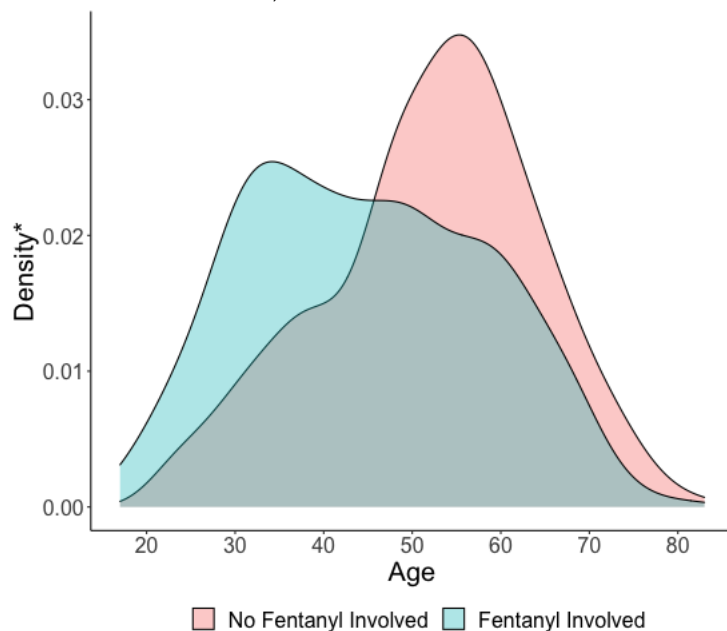


Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic. Only data from 2015 onward included due to the rarity of fentanyl overdose deaths in preceding years.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

The below charts (from 2018-2019) further explore the demographics of fentanyl overdose deaths. Fentanyl deaths overall tend to occur among younger decedents than overdose deaths that do not involve fentanyl (**Figure 33**). Furthermore, white and Latinx decedents from fentanyl overdose tend to be younger than Black/African American decedents from fentanyl overdose (**Figure 34**).

Figure 33: Age distribution of opioid, methamphetamine, and cocaine overdose deaths by fentanyl involvement in CCSF, 2018-2019

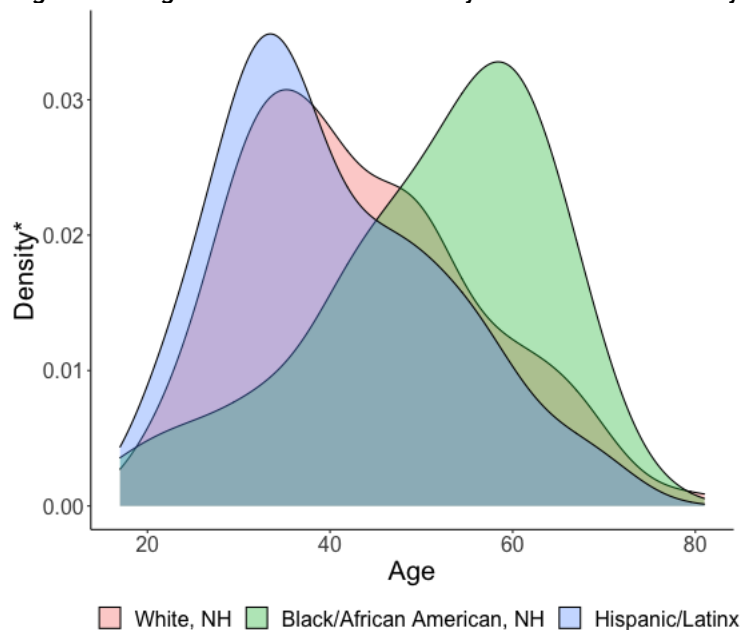


Shaded regions represent the proportion of deaths in that subgroup that occur at a given age. Shaded regions do NOT represent frequency, number, or rate.

Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 34: Age distribution of fentanyl overdose deaths by race/ethnicity in CCSF, 2018-2019



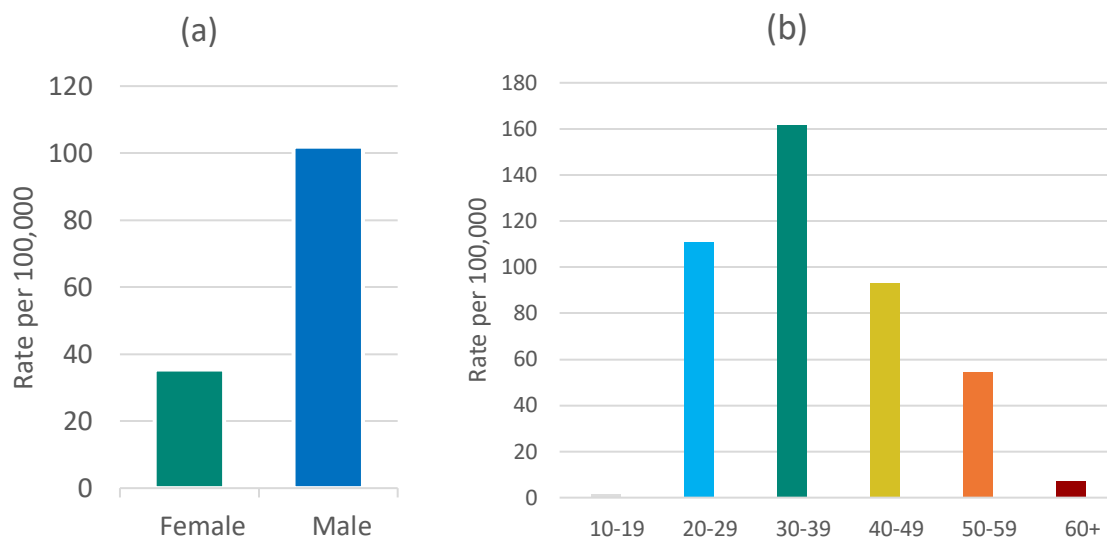
Shaded regions represent the proportion of deaths in that subgroup that occur at a given age. Shaded regions do NOT represent frequency, number, or rate.

Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. "Other, NH" race/ethnicity group was excluded due to small counts of events. NH=non-Hispanic.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

The number of admissions to SUD treatment programs for fentanyl as the primary drug was generally fewer than 10 per year through 2017. The number of admissions rose to 43 in 2018 and 569 in 2021, representing 9% of all SUD treatment admissions that year. The highest rates of SUD treatment admissions for fentanyl were among males (**Figure 35a**), persons aged 30-39 years (**Figure 35b**), and Black/African Americans (**Figure 36**). The most common route of administration among those admitted to SUD treatment was smoking (68%; **Figure 37**) and the most common secondary substances were methamphetamine (47%) and heroin (11%).

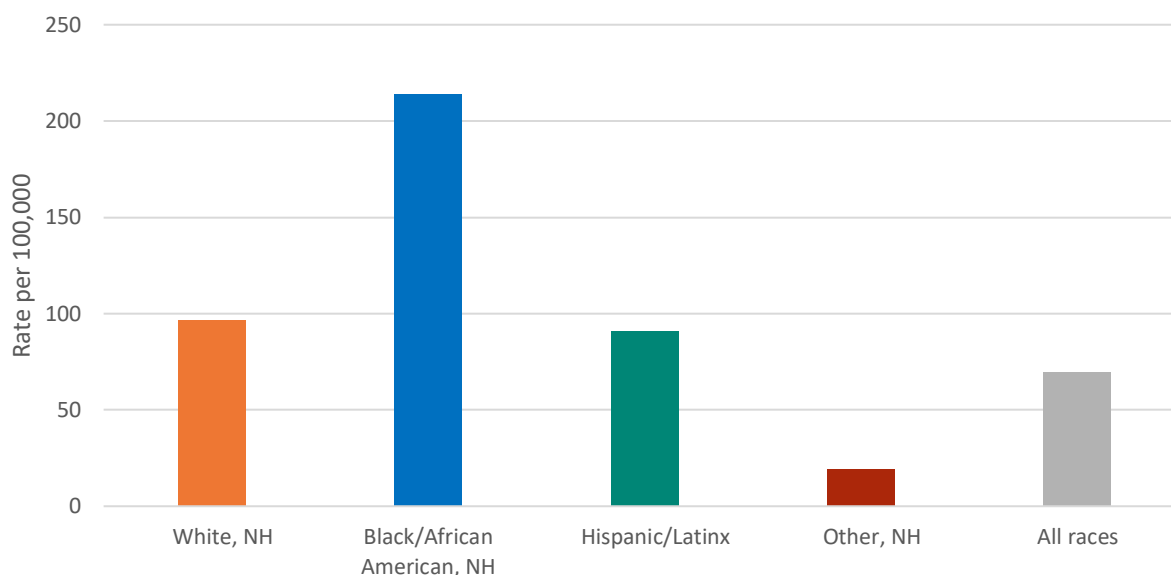
Figure 35: Rate of Admissions to Programs Treating Substance Use Disorders for Fentanyl by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for fentanyl among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services.

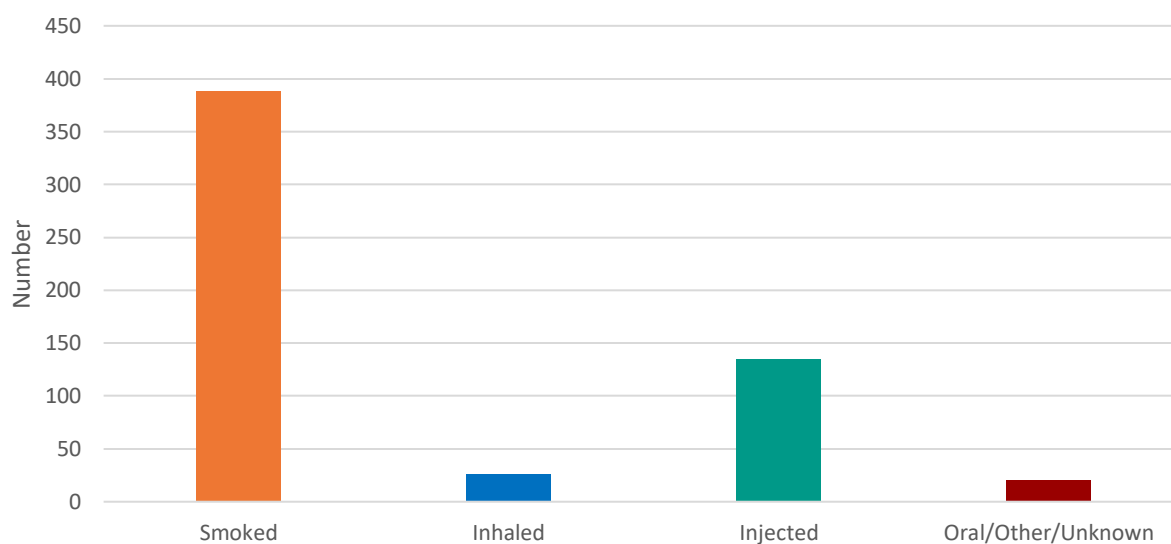
Figure 36: Rate of Admissions to Programs Treating Substance Use Disorders for Fentanyl by Race/Ethnicity in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 37: Number of Admissions to Programs Treating Substance Use Disorders for Fentanyl by Route of Administration in CCSF, 2021



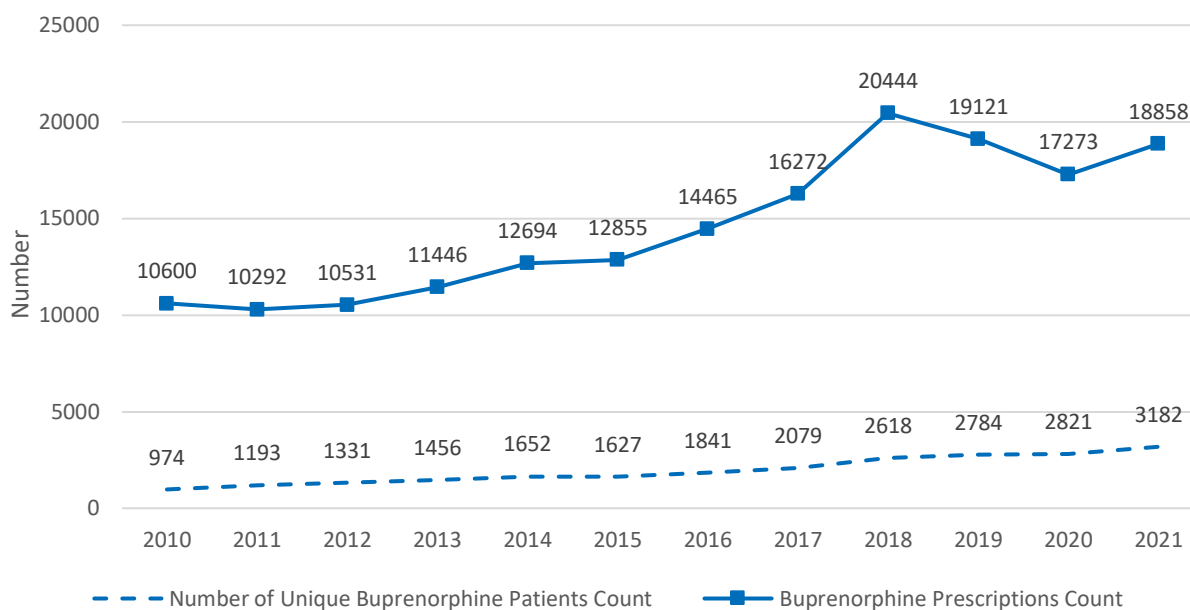
Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

4.1.5 Buprenorphine

Buprenorphine is a highly effective treatment for opioid use disorder that has also been shown to reduce overdose mortality. While the number of unique patients prescribed buprenorphine consistently increased since 2010, showing that more people are being reached with buprenorphine, there was a decline in the number of buprenorphine prescriptions in 2019 and 2020 that was partially reversed in 2021. (**Figure 38**). .

Figure 38: Annual Number of Buprenorphine Prescriptions and Number of Unique Patients Receiving Buprenorphine Prescriptions in CCSF, 2010–2021



*Data include all buprenorphine prescriptions issued outside of substance use disorder treatment programs.
Source: California Controlled Substance Utilization Review and Evaluation System (CURES 2.0)*

Several efforts have been made to expand buprenorphine access in San Francisco, aiming to both treat opioid use disorder and reduce overdose risk, particularly with the increased presence of fentanyl. Programs have been initiated to start buprenorphine when patients are in emergency departments or admitted to hospitals.

Modeled on the success of low threshold buprenorphine offered by Street Medicine at the Syringe Access Site since 2016, there were multiple efforts to lower the threshold to buprenorphine access as part of San Francisco's overdose response plan. Whole Person Integrated Care, Street Medicine, Shelter Health, and Urgent Care programs continued efforts to identify and provide low barrier treatment for opioid use disorders throughout the community. In 2021, 475 clients were assessed for buprenorphine treatment, with 346 clients of them prescribed buprenorphine; 256 of those prescribed were new starts on the medication. Street Medicine can assess for and initiate buprenorphine at the 50 Ivy Street clinic, syringe

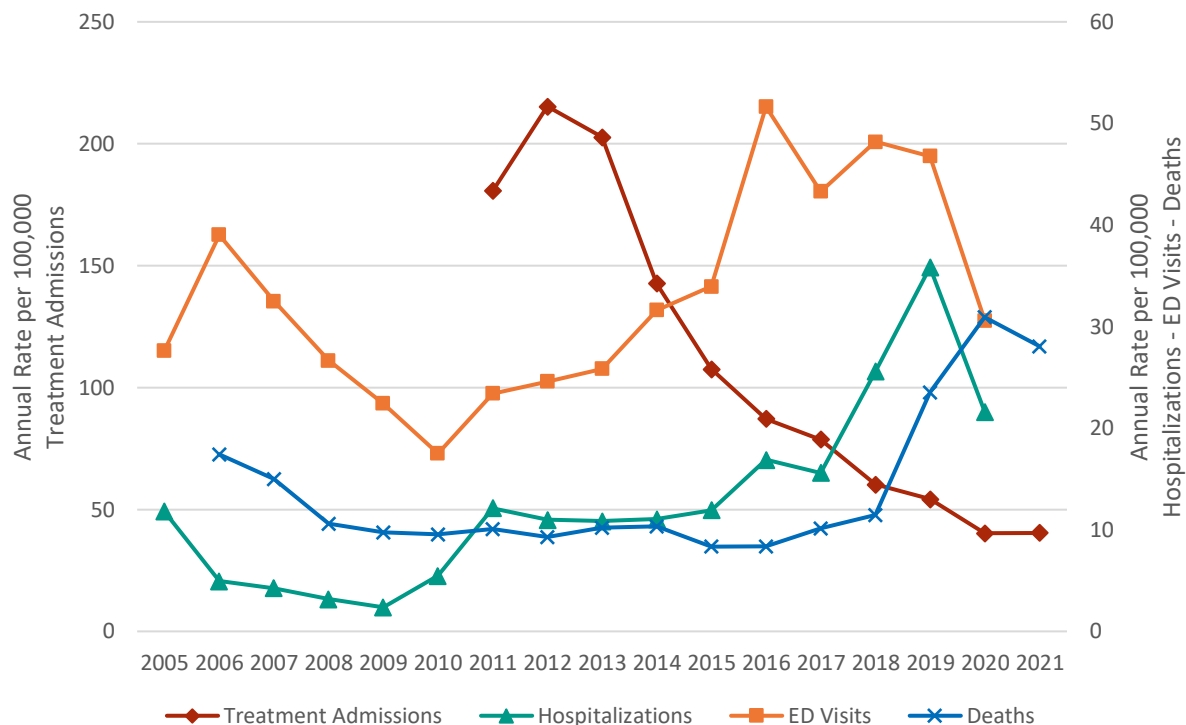
access sites, health fairs, navigation centers, on the streets, and in parks, reducing the barrier to treatment for people experiencing homelessness.

In addition, in early 2022, several programs expanded care, including BAART Market Opioid Treatment Program, which extended services hours to 10pm and plans to open weekend shifts, and the Office-Based Buprenorphine Induction Clinic, which added evening hours. Additional expansions included, mobile drug checking and syringe access, pharmacy delivery for medications for addiction treatment, and a 79% increase in clients served by the Behavioral Health Services Pharmacy at 1380 Howard in fiscal year 2021-2022 compared to 2020-2021, with the provision of novel strategies for buprenorphine initiation including blister packs allowing for novel approaches to starting buprenorphine (i.e., “overlap starts”).

4.2 COCAINE/CRACK

From 2020 to 2021, the number of cocaine/crack related overdose deaths decreased by 15%. Since 2012, when the annual rate (per 100,000 residents) for cocaine/crack SUD treatment admissions was highest, admissions have decreased 82% (**Figure 39**). Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Figure 39: Rate of Cocaine Health Indicators in CCSF, 2005–2021



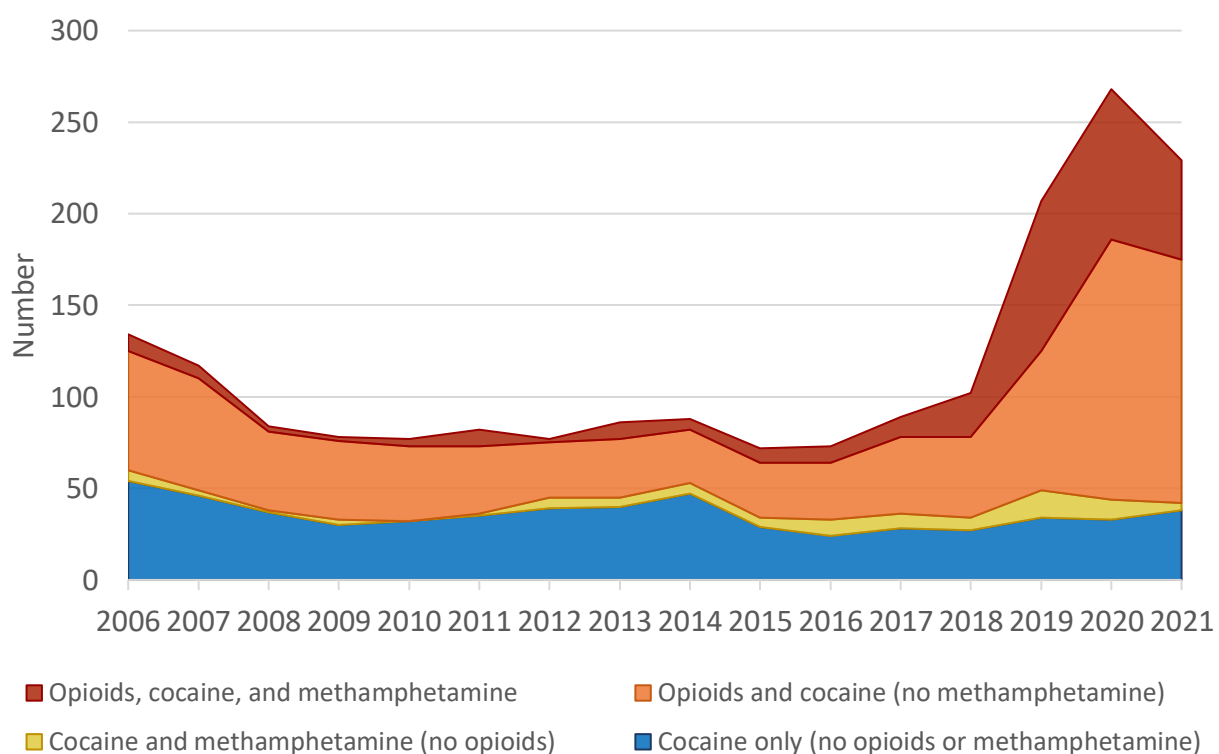
Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or nonprimary ICD-9 codes: E855.2 (poisoning), 970.81 (poisoning) and ICD-10 code: T40.5 (poisoning); primary only ICD-9 codes: 304.2 (dependence), 305.6 (abuse) and ICD-10 code: F14 (dependence/abuse/use). For ICD-10 code T40.5, a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Deaths involving acute cocaine toxicity declined in 2021. Among the 229 cocaine-related overdose deaths in San Francisco in 2021, 16% were exclusive to cocaine, 75% involved fentanyl, 13% involved heroin, 7% involved prescription opioids, 25% involved methamphetamine, and 3% involved a benzodiazepine. The increase in cocaine overdose deaths beginning in 2016 was due to the involvement of opioids (**Figure 40**) and, specifically, fentanyl (**Figure 41**).

There have been several recent suspected and confirmed reports of nonfatal and fatal overdose from cocaine/crack that either contained fentanyl or was fentanyl mistaken for cocaine/crack (see, e.g., www.sfcdcp.org/health-alerts-emergencies/health-alerts/).

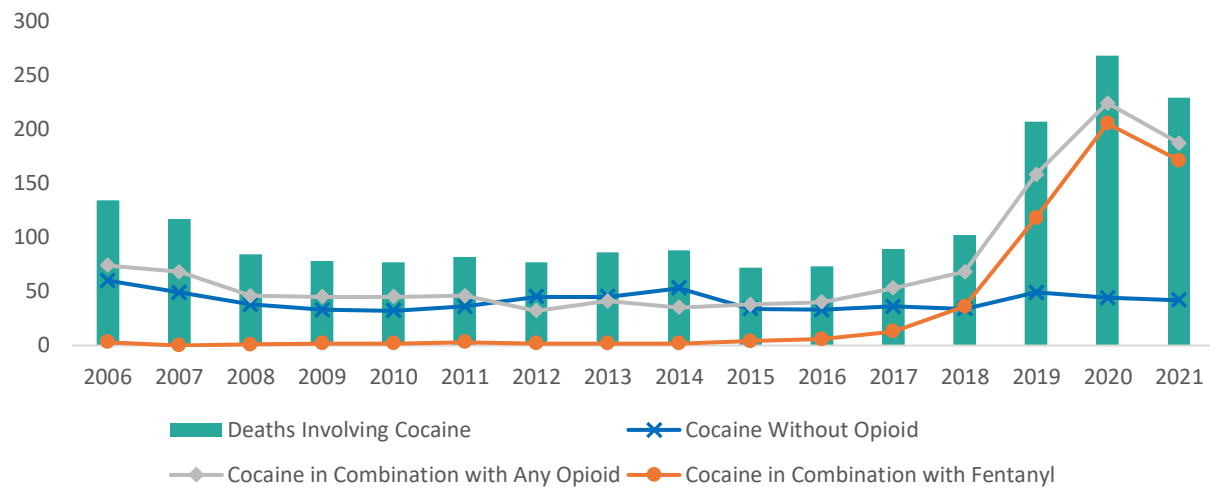
Figure 40: Number of Cocaine Overdose Deaths by Mutually Exclusive Additional Causative Substances in CCSF, 2006–2021



The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 41: Number of Cocaine Overdose Deaths by Opioid/Fentanyl Involvement in CCSF, 2006–2021

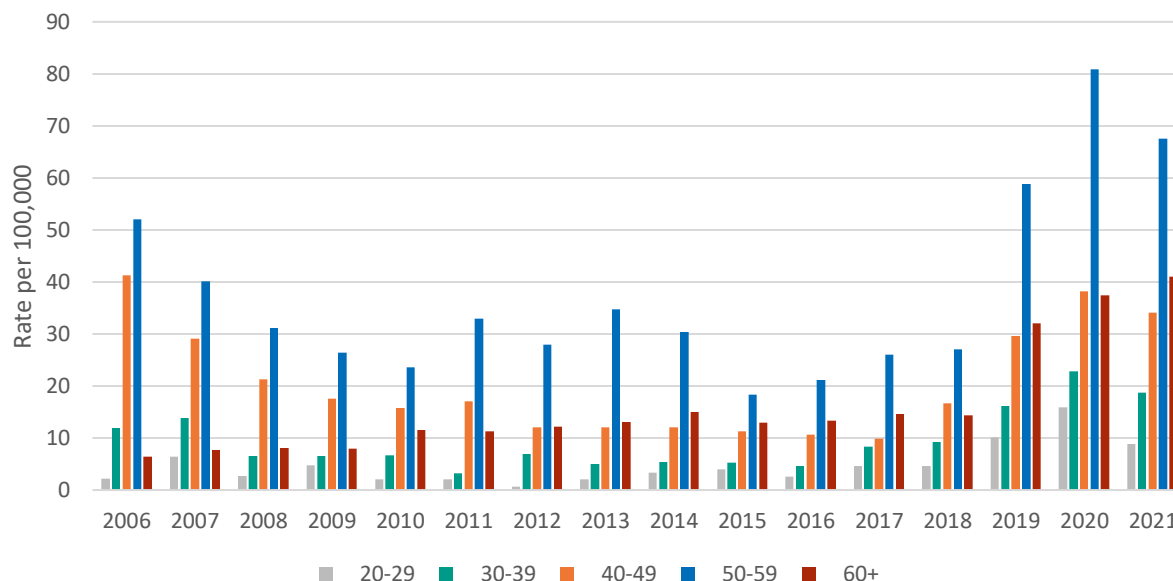


Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Cocaine overdose deaths were most likely to occur among persons aged 50-59 years (**Figure 42**), Black/African Americans (**Figure 44**), and males compared to females (**Figure 45**). In the absence of opioids, deaths due to cocaine overdose were most common among persons 60 years or older, and rare among persons under 50 years (**Figure 43**).

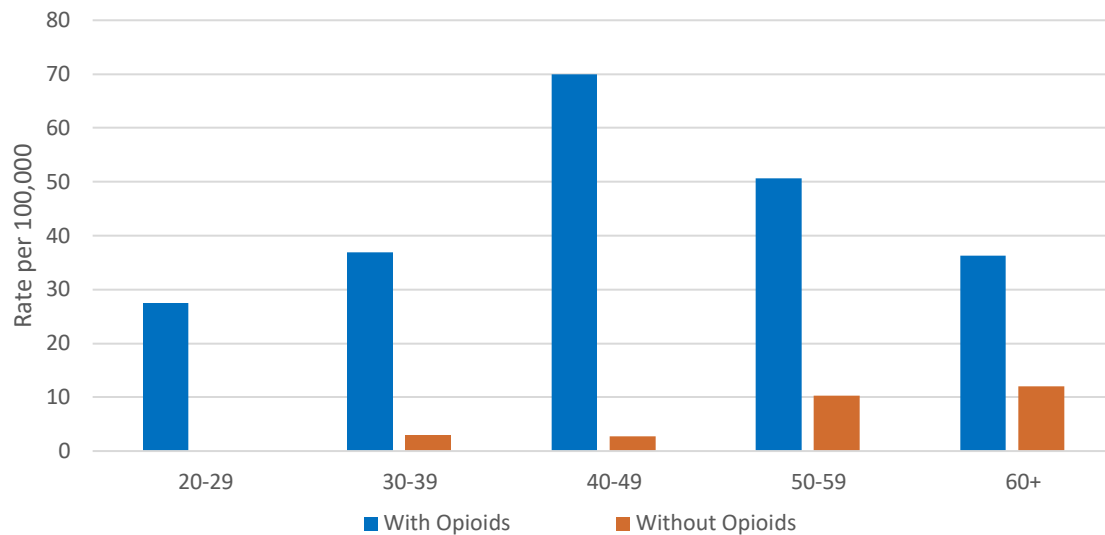
Figure 42: Rate of Cocaine Overdose Deaths by Age Category in CCSF, 2006–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides; <5 deaths due to cocaine among individuals <20 years of age excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

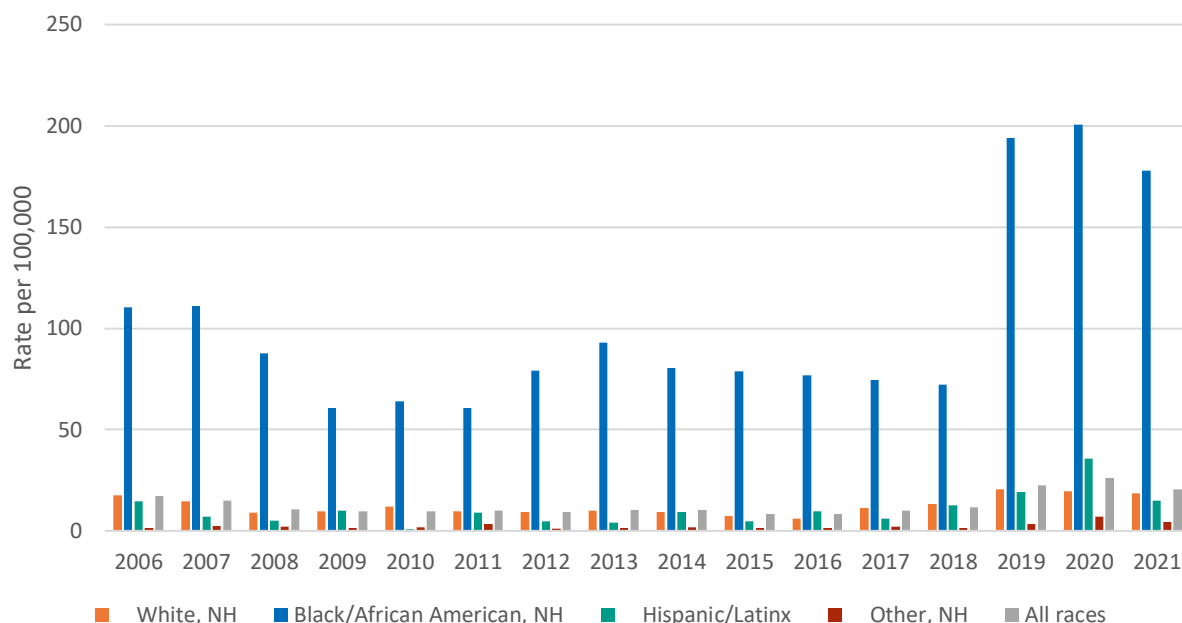
Figure 43: Rate of Cocaine Overdose Deaths with and without Opioids by Age Category in CCSF, 2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides; <5 deaths due to cocaine among individuals <20 years of age excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

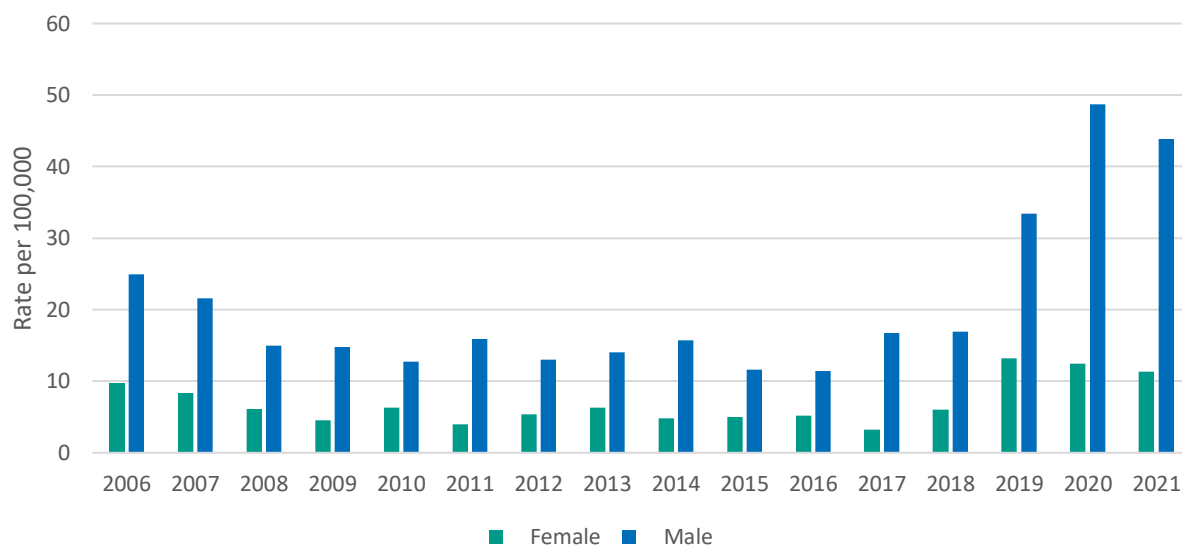
Figure 44: Rate of Cocaine Overdose Deaths by Race/Ethnicity in CCSF, 2006–2021



Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 45: Rate of Cocaine Overdose Deaths by Sex in CCSF, 2006–2021



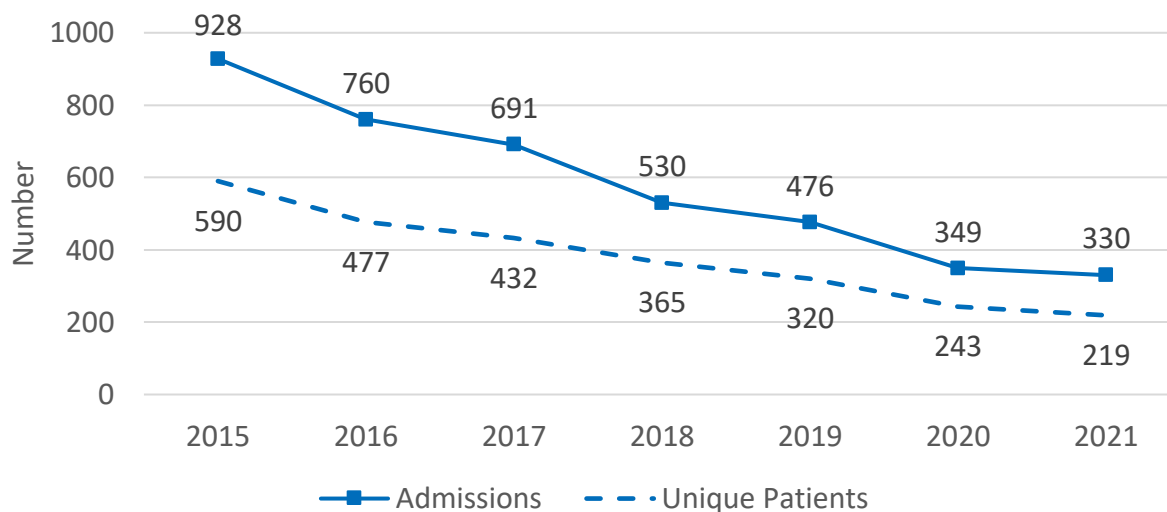
Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

The number of SUD treatment admissions and unique persons admitted for cocaine/crack as the primary drug has steadily declined since at least 2012. While the decline in 2020 can be attributed to the COVID-19 pandemic, the overall decline is believed to be partly due to changes in the Drug Medi-Cal Organized Delivery System, and possibly shifts in services for people experiencing homelessness (See **Section 3.2**).

From 2020 to 2021, SUD treatment admissions for cocaine/crack in San Francisco decreased 5%. The rate of SUD treatment admissions for cocaine was highest among males (**Figure 47a**), people aged 50-59 years (**Figure 47b**), and Black/African Americans (**Figure 48**). The most common route of administration was smoking (78%, **Figure 49**). The most common secondary substances included alcohol (28%), followed by heroin (14%), and cannabis (11%), and methamphetamine (9%).

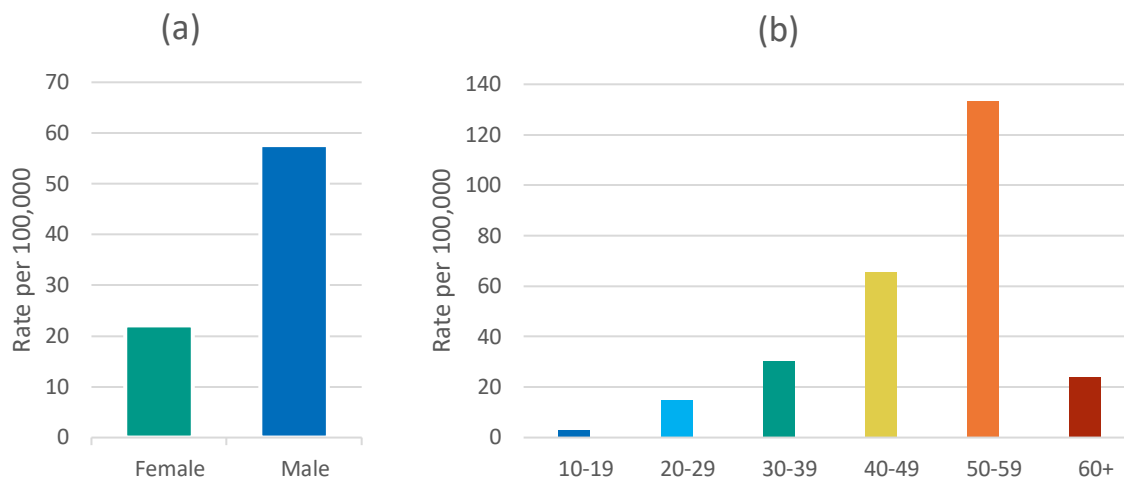
Figure 46: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Cocaine/Crack as the Primary Substance in CCSF, 2015–2021



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

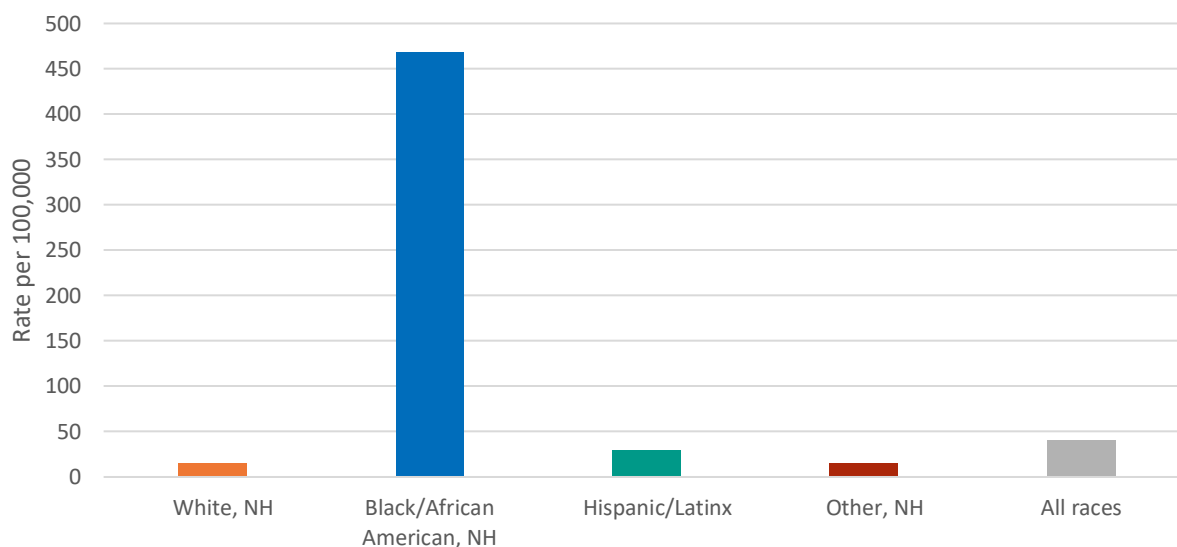
Figure 47: Rate of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data only include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for cocaine/crack among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

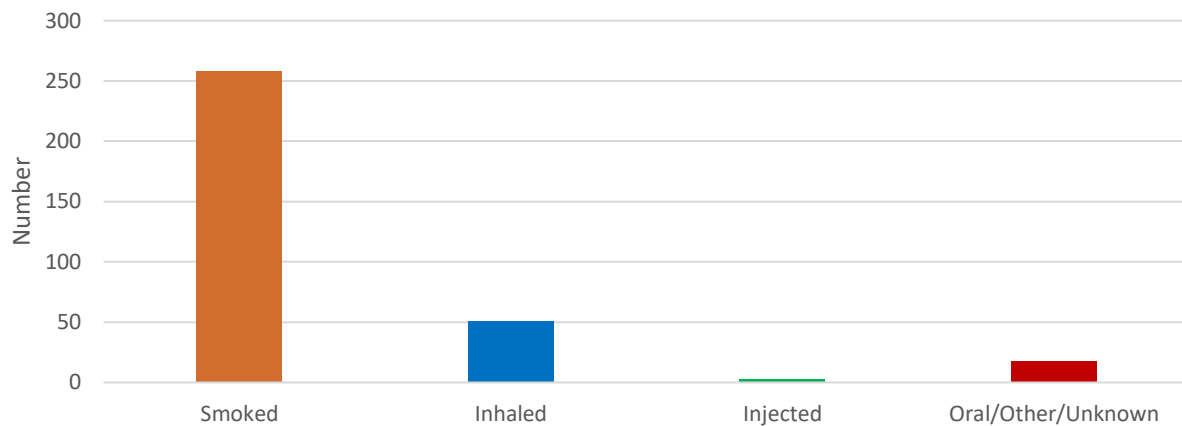
Figure 48: Rate of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by Race/Ethnicity in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 49: Number of Admissions to Programs Treating Substance Use Disorders for Cocaine/Crack by Route of Administration in CCSF, 2021



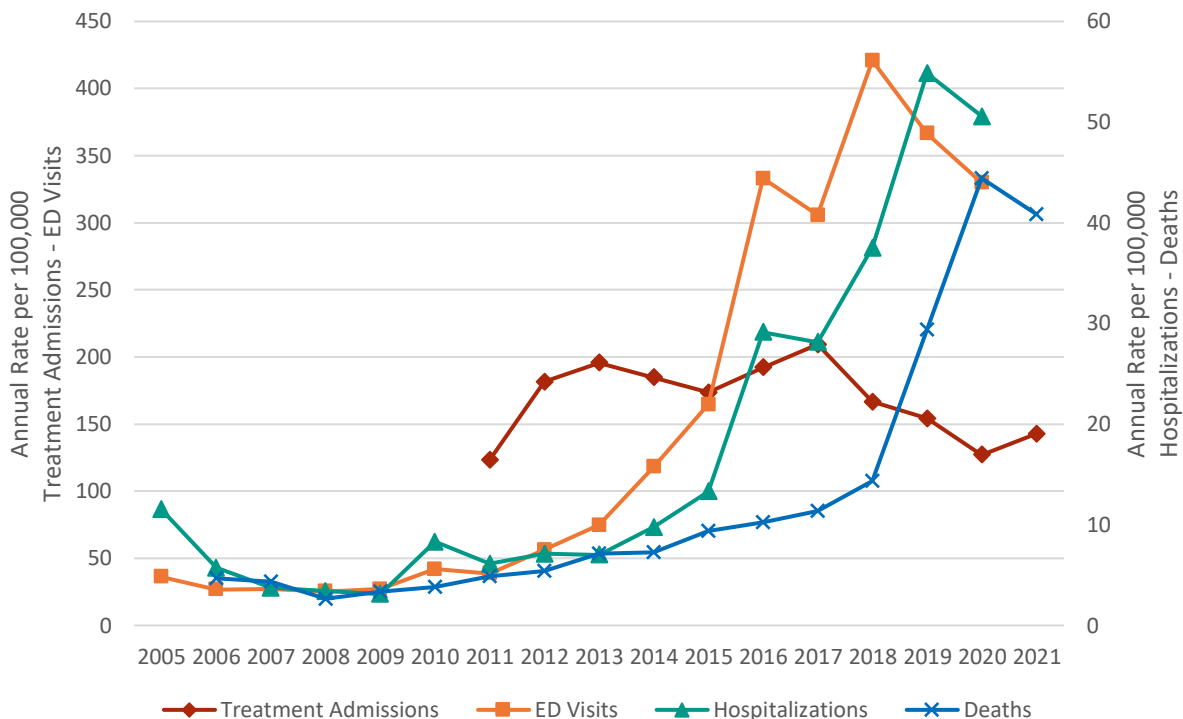
Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

4.3 METHAMPHETAMINE

Indicators continue to suggest prevalent methamphetamine-related morbidity and mortality in San Francisco. The rate of death due to acute methamphetamine toxicity declined in 2021. As is the case with cocaine/crack, most of the recent increase in methamphetamine toxicity deaths can be attributed to fentanyl (see **Figure 51**). SUD treatment admissions increased in 2021 (**Figure 50**). Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Figure 50: Rate of Methamphetamine Health Indicators in CCSF, 2005–2021

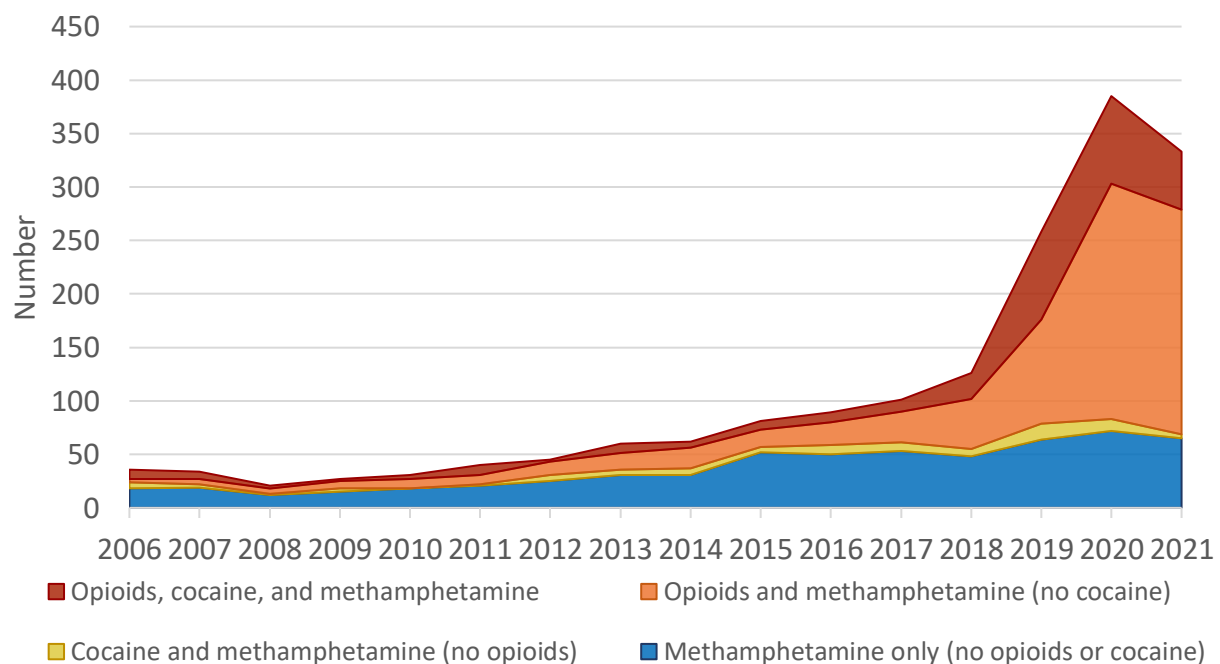


Rate is calculated per 100,000 CCSF population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E854.2, 969.72 (poisoning), and ICD-10 code: T43.62 (poisoning); primary only ICD-9 codes: 304.4 (dependence), 305.7 (abuse) and ICD-10 code: F15 (dependence/abuse/use). For ICD-10 code: T43.62, a six in the sixth position involve underdosing and were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015. Hospitalizations and emergency department visits resulting in death were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions were provided by the Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Among the 333 deaths due to methamphetamine toxicity in San Francisco in 2021, 19% involved methamphetamine exclusively (meaning they did not involve any opioids, cocaine, or benzodiazepines), 75% involved fentanyl, 11% involved heroin, 4% involved prescription opioids, 17% involved cocaine, and 3% involved a benzodiazepine. Prior to 2015, increases in methamphetamine overdose deaths were driven by deaths due to methamphetamine without opioids. However, since 2016, deaths caused by opioids, particularly fentanyl, have driven methamphetamine-related deaths (**Figure 51** and **Figure 52**).

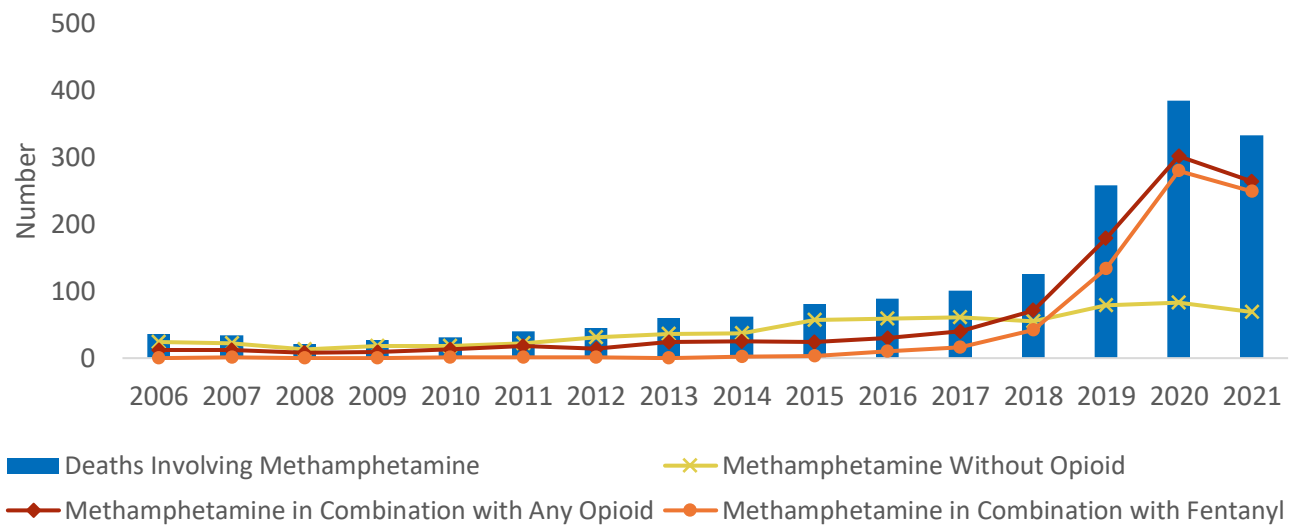
Figure 51: Number of Methamphetamine Overdose Deaths by Mutually Exclusive Additional Causative Substance in CCSF, 2006–2021



The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 52: Number of Methamphetamine Overdose Deaths by Opioid/Fentanyl Involvement in CCSF, 2006–2021

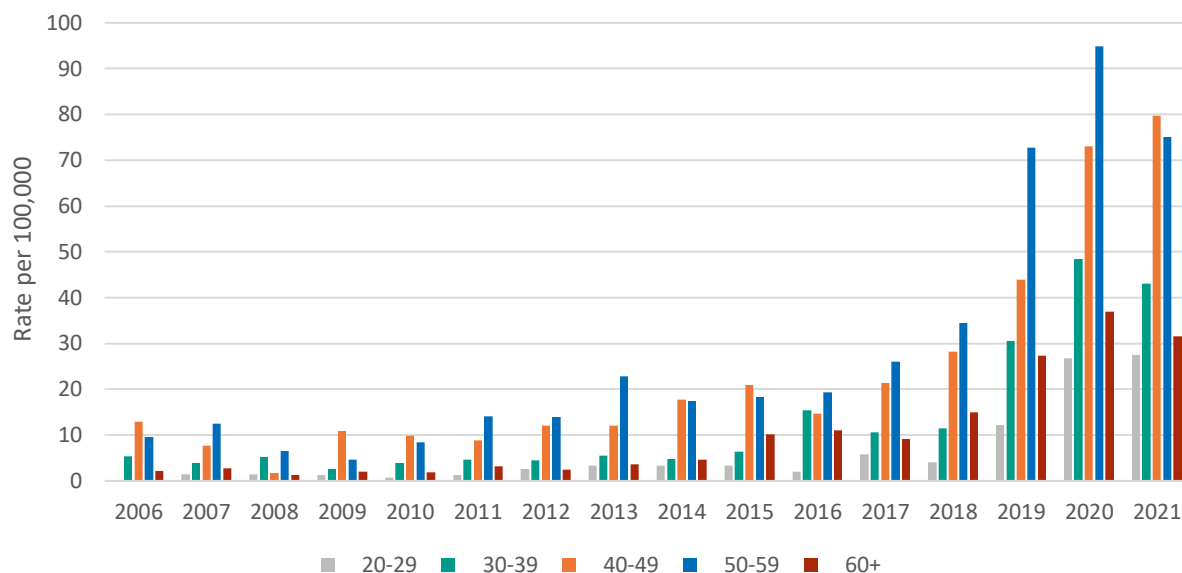


Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. Fentanyl includes fentanyl analogues.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Acute methamphetamine toxicity deaths were most likely to occur among persons aged 40–49 years (**Figure 53**), Black/African Americans (**Figure 55**), and males compared to females (**Figure 56**). In the absence of opioids, deaths due to methamphetamine overdose were highest among persons 50-59 years and uncommon among younger persons (**Figure 54**).

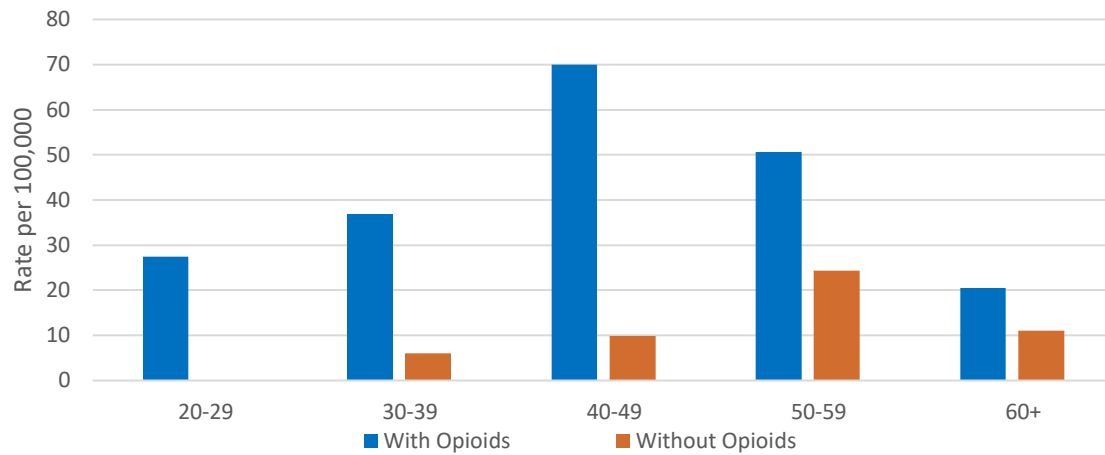
Figure 53: Rate of Methamphetamine Overdose Deaths by Age Category in CCSF, 2006–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides, <5 deaths due to methamphetamine among individuals <20 years of age excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

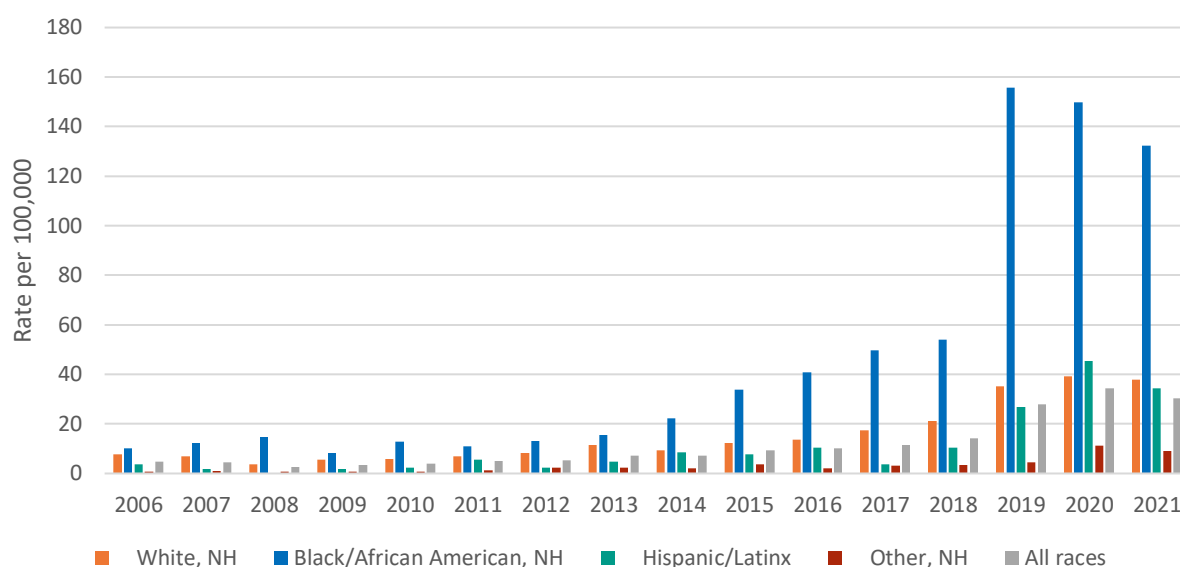
Figure 54: Rate of Methamphetamine Overdose Deaths with and without Opioids by Age Category in CCSF, 2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides, suicides, <5 deaths due to methamphetamine among individuals <20 years of age excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

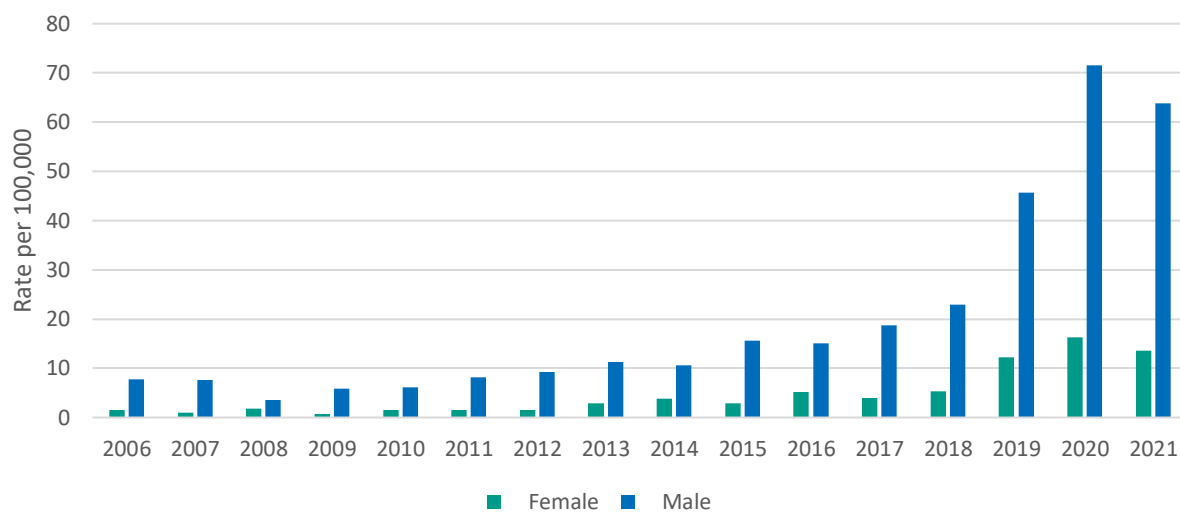
Figure 55: Rate of Methamphetamine Overdose Deaths by Race/Ethnicity in CCSF, 2006–2021



Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. NH=non-Hispanic.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 56: Rate of Methamphetamine Overdose Deaths by Sex in CCSF, 2006–2021

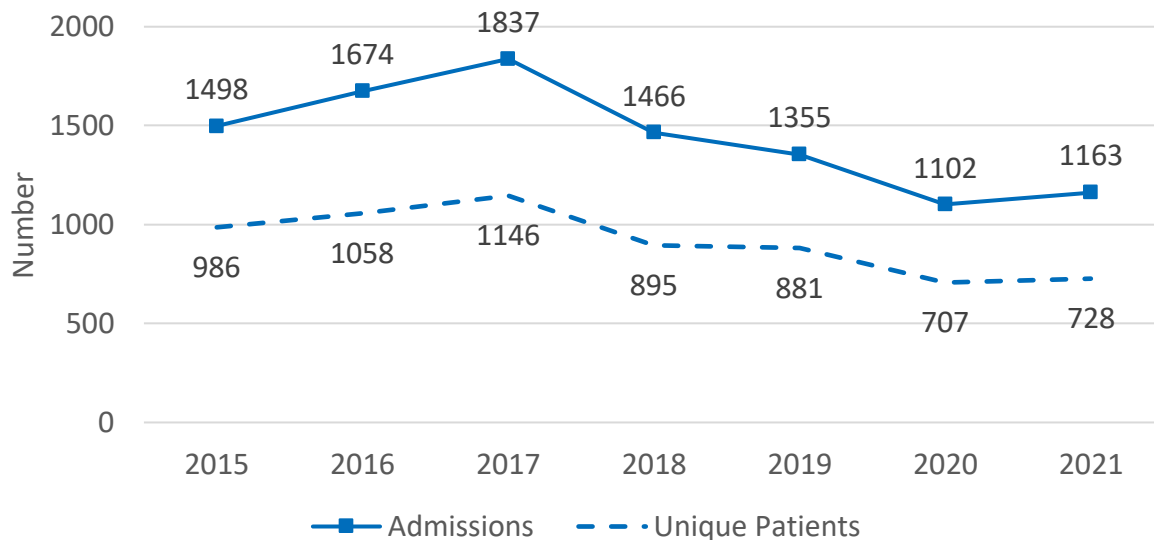


Rate is calculated per 100,000 population. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded. No other sex categories were noted.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

The number of SUD treatment admissions for methamphetamine increased from 2020 to 2021, and the number of unique patients increased by 3% (**Figure 57**). The highest rates of SUD treatment admissions for methamphetamine were among males (**0a**), persons aged 30–39 years (**0b**), and Black/African Americans (**Figure 59**). The most common reported route of administration was smoking (77%, **Figure 60**) and the most common secondary substances were cannabis (19%), alcohol (17%), and heroin (10%).

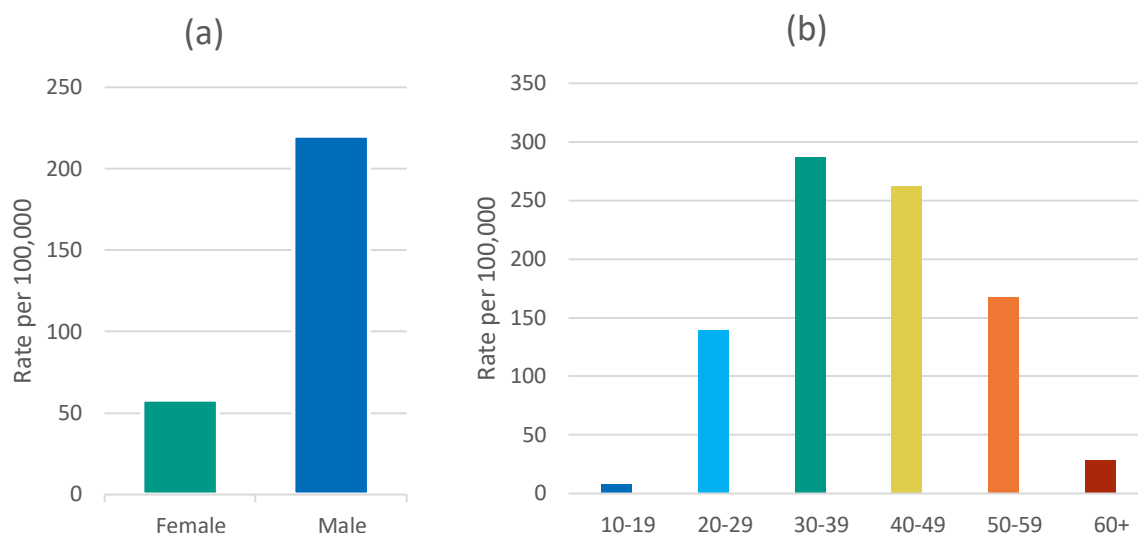
Figure 57: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance in CCSF, 2015–2021



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

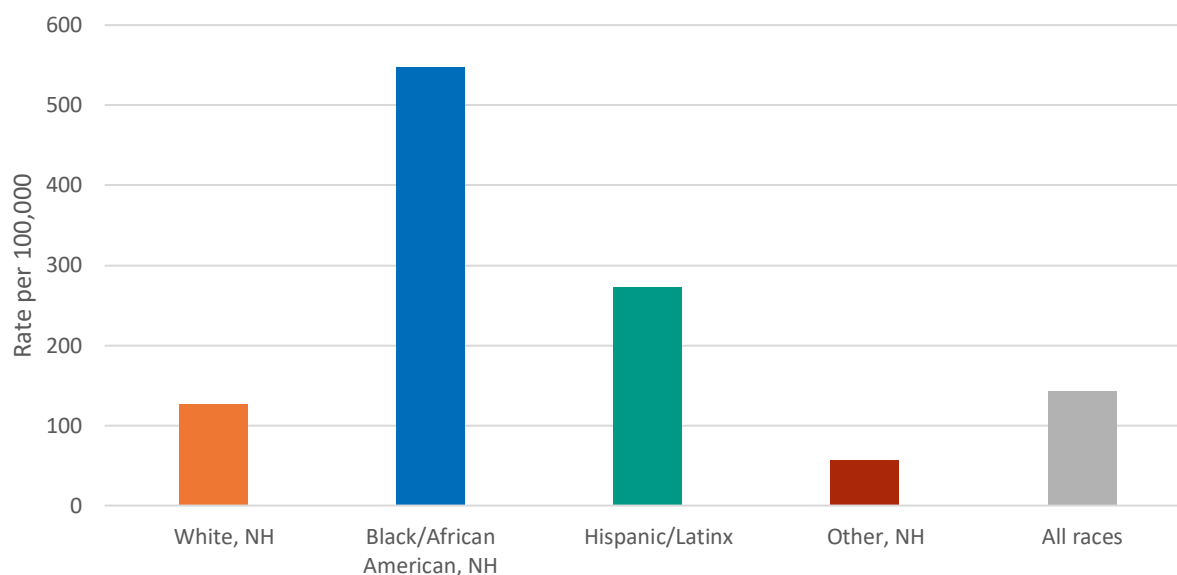
Figure 58: Rate of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for methamphetamine among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

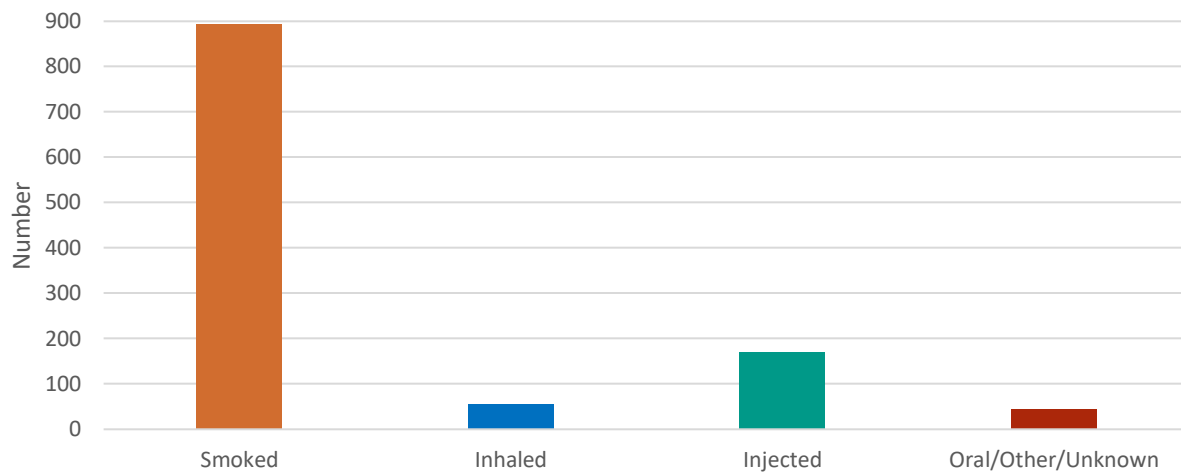
Figure 59: Rate of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by Race/Ethnicity in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 60: Number of Admissions to Programs Treating Substance Use Disorders for Methamphetamine as the Primary Substance by Route of Administration in CCSF, 2021



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

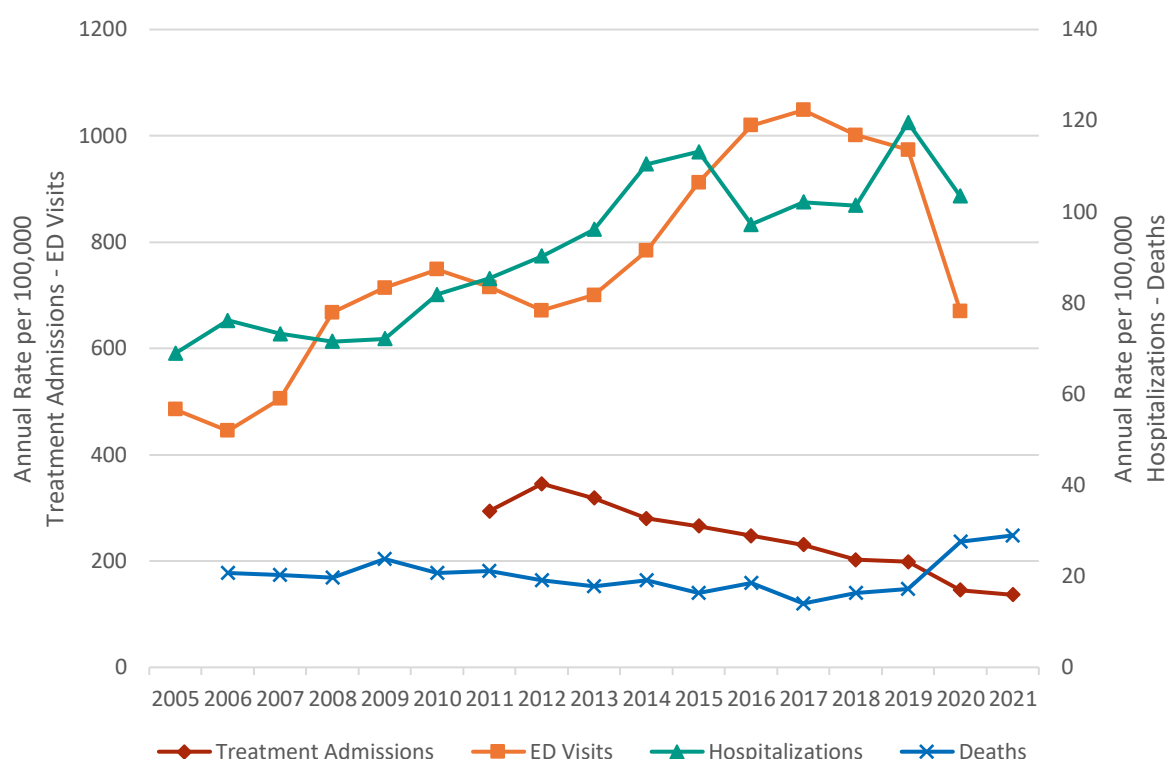
Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

4.4 ALCOHOL

Morbidity and mortality related to alcohol use is measured differently from other substances. Alcohol-related deaths are defined as deaths with alcohol as a contributing factor, such as alcoholic liver disease, in contrast to other substances which are limited to overdose/acute poisoning deaths. Alcohol-related deaths had remained below their peak in 2009 until exceeding that level in 2020 and 2021 (**Figure 61**). Alcohol was responsible for 17% of all SUD treatment admissions in 2021, making it the third-leading primary substance for SUD treatment admissions that year. Alcohol was also one of the most common substances resulting in hospitalizations and emergency department visits.

For additional information regarding the impact of alcohol use on CCSF, see **Economic and Administrative Costs Related to Alcohol Abuse in the City and County of San Francisco** at: www.sfbos.org/sites/default/files/BLA_Report_Alcohol_Final-041017.pdf.

Figure 61: Rate of Alcohol Health Indicators in CCSF, 2005–2021

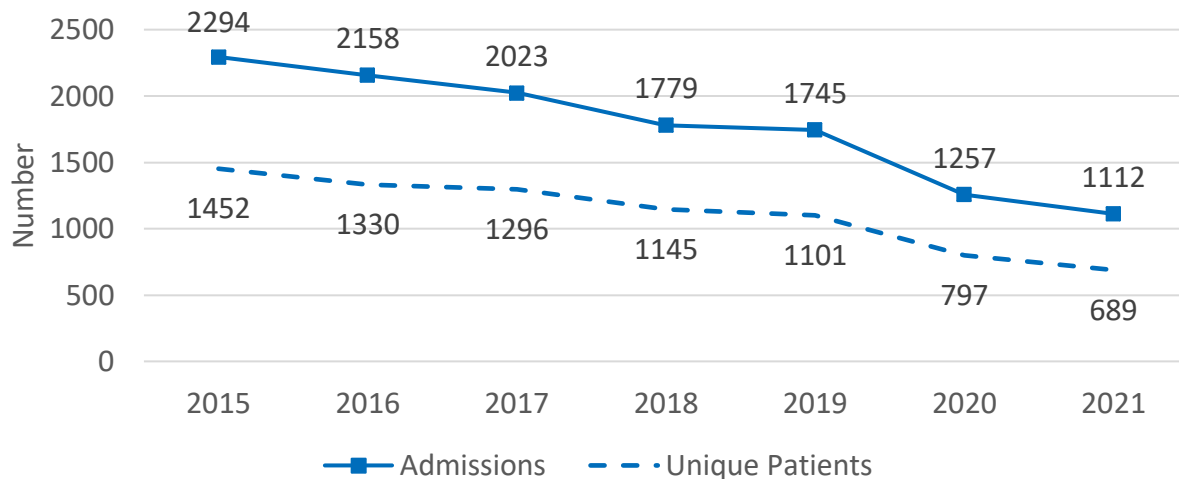


Alcohol-related deaths include both acute poisoning and other deaths involving acute or chronic use of alcohol (e.g., combined toxicity of heroin and ethanol, acute ethanol intoxication, complications of chronic ethanolism, end-stage liver disease due to alcoholism, complications of alcoholic cardiomyopathy). Homicides and suicides were excluded. Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E860.0, E860.1, E860.2, E860.9 (acute effects), 980.0, 980.1, 980.9 (acute effects) and ICD-10 code: X45, Y15, T51.0, T51.1, TF1.9 (acute effects); primary only ICD-9 codes: 291, 305.0, 303.0, 303.9, 790.3 (non-acute effects) and ICD-10 codes: F10, R78.0 (non-acute effects); admissions and visits resulting in death were excluded. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Sources: Alcohol-related mortality obtained from California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Treatment admissions provided by the Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

SUD treatment admissions and the number of unique patients treated for alcohol have decreased continuously since at least 2015 (**Figure 62**). The rate of SUD treatment admissions for alcohol was highest among males (**Figure 63a**), people aged 50-59 years (**Figure 63b**), and Black/African Americans (**Figure 64**). The most common secondary substances were methamphetamine (16%), cannabis (13%), and cocaine/crack (10%).

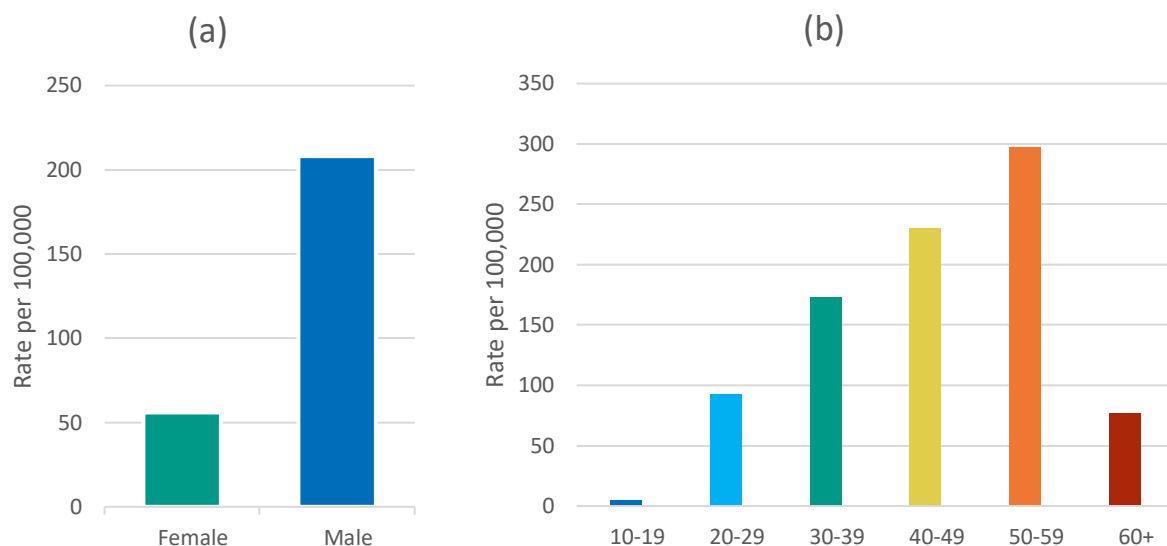
Figure 62: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Alcohol as the Primary Substance in CCSF, 2015–2021



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

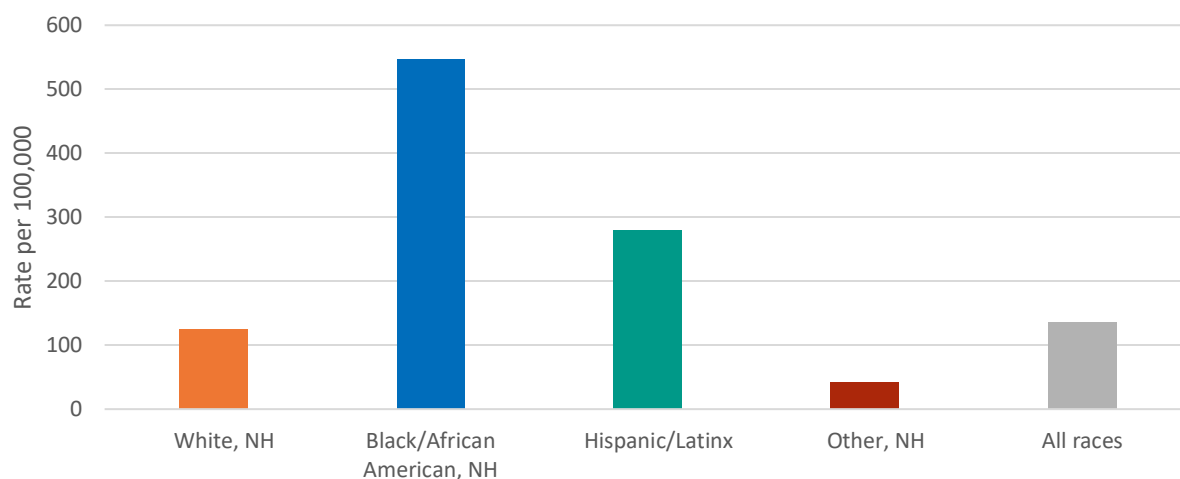
Figure 63: Rate of Admissions to Programs Treating Substance Use Disorders for Alcohol by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. There were <5 admissions for alcohol among persons 10 to 19 years of age.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 64: Rate of Admissions to Programs Treating Substance Use Disorders for Alcohol by Race/Ethnicity in CCSF, 2021



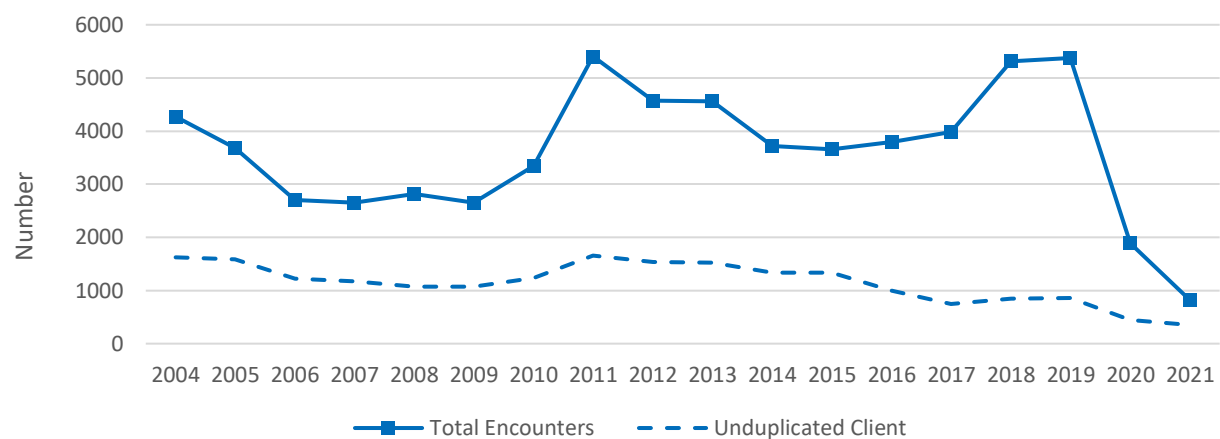
Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

4.4.1 Sobering Center

The Sobering Center, founded in San Francisco in 2003, is a 24/7 program providing support to individuals who are actively intoxicated by alcohol (and sometimes also intoxicated due to other substances). A team including registered nurses, medical assistants, health workers, and respite workers serves clients aged 18 years and older from ambulance and police services, as well as walk-ins through a pre-hospital diversion unit. The Sobering Center saw 352 unique individuals and had 1,821 encounters in 2021, a decrease from pre-pandemic years. The total number of clients and encounters at the sobering center was impacted by COVID-19, as well as other programs opening that care for a similar population (**Figure 65**).

Figure 65: Annual Number of Sobering Center Visits and Unduplicated Clients in CCSF, 2004–2021

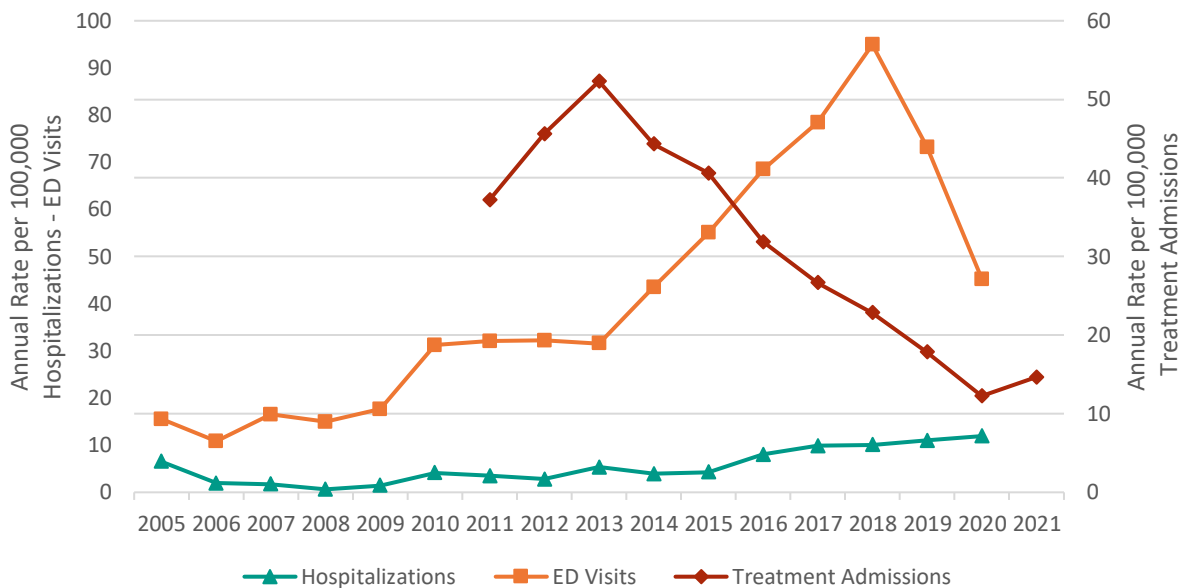


Source: Sobering Center, San Francisco Department of Public Health.

4.5 CANNABIS

Local indicators for cannabis in San Francisco were mixed. Emergency department visits involving cannabis increased through 2018, but have declined since, while hospitalizations remained fairly stable. SUD treatment admissions for cannabis decreased from 2013 to 2020, but increased 14% from 2020 to 2021 (**Figure 66**). Cannabis-related deaths are not reported due to low numbers.

Figure 66: Rate of Cannabis Health Indicators in CCSF, 2005–2021

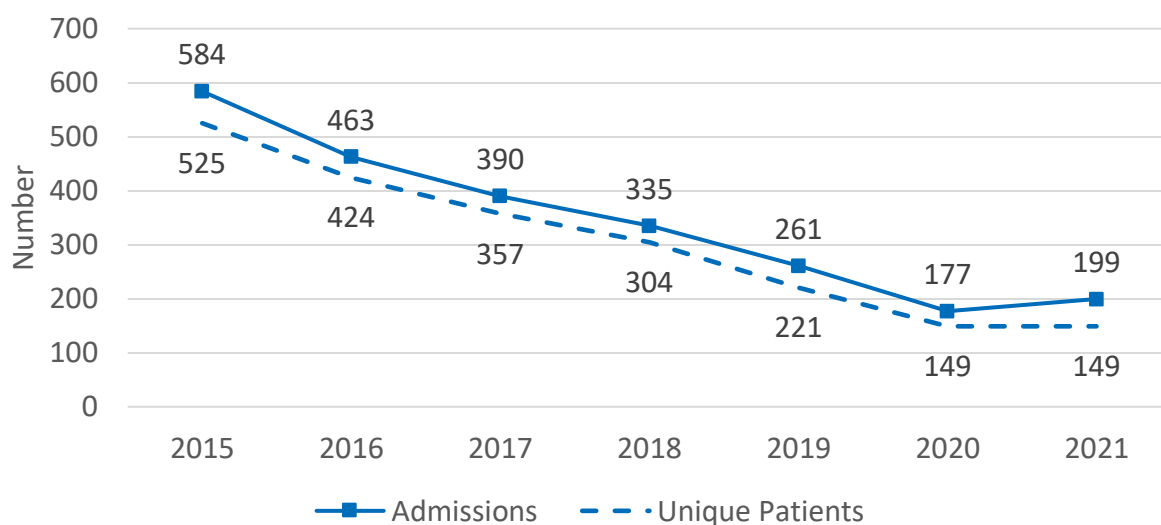


Emergency department visits and hospitalizations include primary or non-primary ICD-9 codes: E854.1.0, (poisoning), 969.6 (poisoning) and ICD-10 code: T40.7(poisoning); primary only ICD-9 codes: 304.3, 305.2 (dependence) (abuse) and ICD-10 codes: F12 (dependence/abuse/use). For ICD-10 code: T40.7, a six in the sixth position involve underdosing and were excluded, as were events resulting in death. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Sources: Treatment admissions were provided by the Behavioral Health Services Division of the San Francisco Department of Public Health and include publicly funded treatment services, excluding the Veterans Administration; admissions include clients admitted in prior years but still receiving services in a particular year. Hospital admissions and emergency department visits for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Cannabis is an uncommon reason for SUD treatment admissions in San Francisco, representing only 3% of total SUD admissions in 2021 (**Figure 67**). The rate of SUD treatment admissions for cannabis was highest among males (**Figure 68a**), people aged 20-29 years (**Figure 68b**), and Black/African Americans (**Figure 69**). The most common secondary substances were methamphetamine (30%) and alcohol (22%).

Figure 67: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Cannabis as the Primary Substance in CCSF, 2015–2021

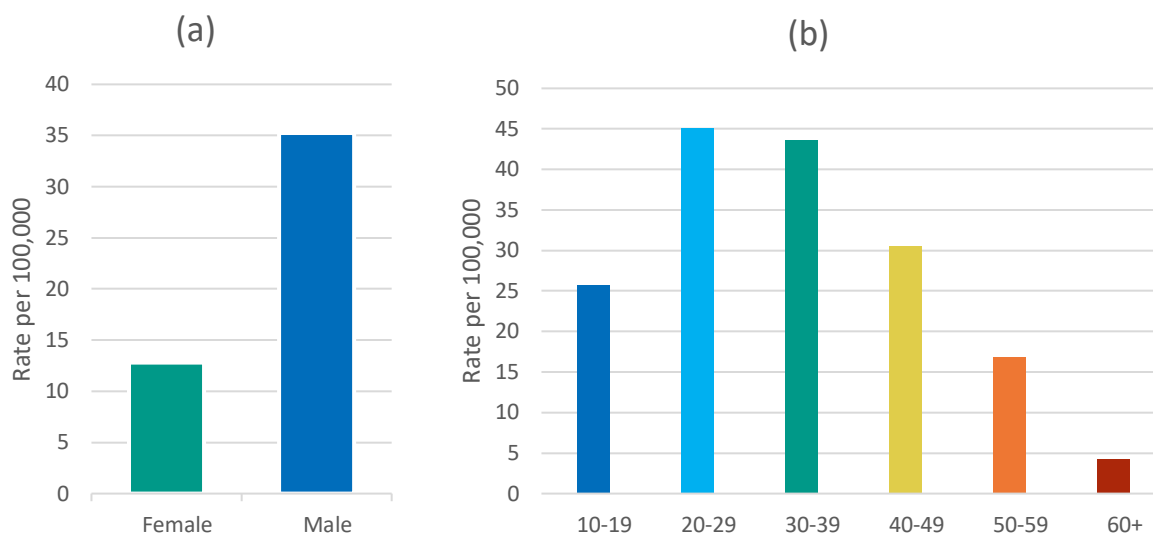


Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

- California Proposition 64, legalizing the sale and distribution of cannabis products, took effect in January 2018. Additional information about cannabis legalization in San Francisco can be found at the CCSF City Performance Unit publication “Cannabis in San Francisco: A Review Following Adult-Use Legalization” (sfcontroller.org/cannabis-industry-equity-applicants-face-lengthy-permitting-process), and “Cannabis Legalization in San Francisco: A Health Impact Assessment” (sfdph.org/dph/files/EHSdocs/HIA/SFDPH-CannabisReport-Fall2017.pdf).
- San Francisco initiated a cannabis social marketing campaign in 2019: www.truthornahsf.org.

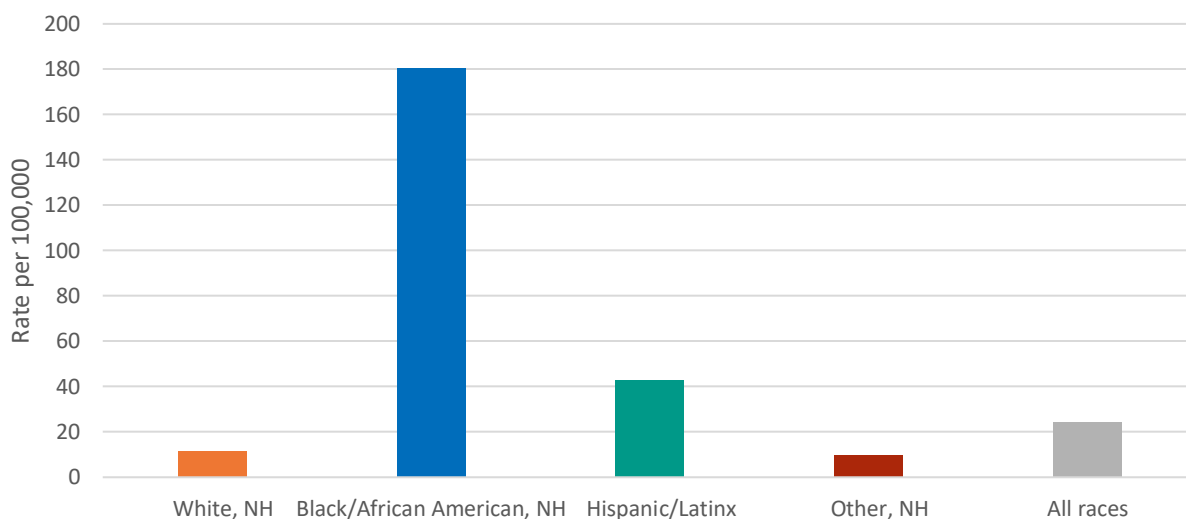
Figure 68: Rate of Admissions to Programs Treating Substance Use Disorders for Cannabis by (a) Sex and (b) Age Group in CCSF, 2021



Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Figure 69: Rate of Admissions to Programs Treating Substance Use Disorders for Cannabis by Race/Ethnicity in CCSF, 2021



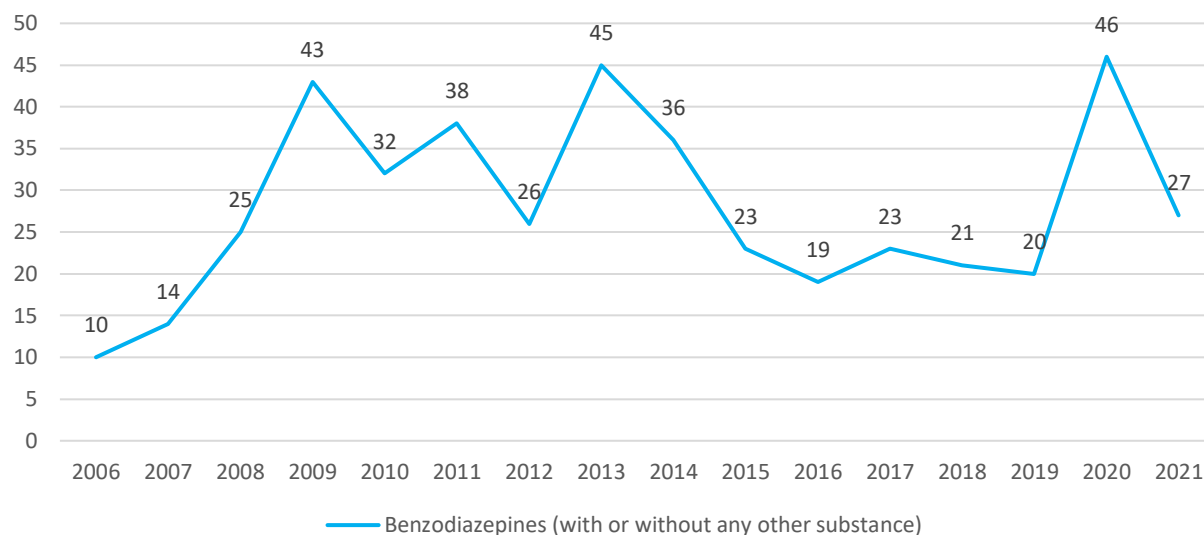
Rate is calculated per 100,000 population. Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. NH=non-Hispanic.

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

4.6 BENZODIAZEPINES

The number of overdose deaths due to benzodiazepines declined in 2021 from a spike in 2020 (Figure 70). Benzodiazepines alone rarely cause overdose deaths; the vast majority of benzodiazepine-related overdose deaths involved opioids (Figure 71). In 2021, nine deaths were caused by benzodiazepines in the absence of opioids.

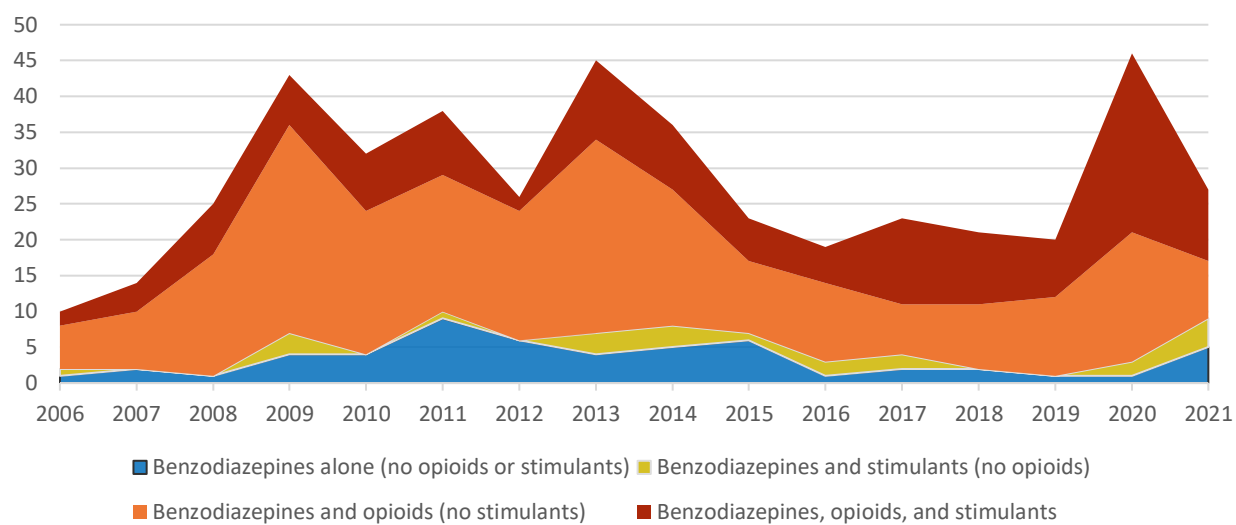
Figure 70: Number of Benzodiazepine Overdose Deaths in CCSF, 2006–2021



Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Figure 71: Number of Benzodiazepines Overdose Deaths by Mutually Exclusive Involvement of Opioids and Stimulants as Cause of Death in CCSF, 2006–2021

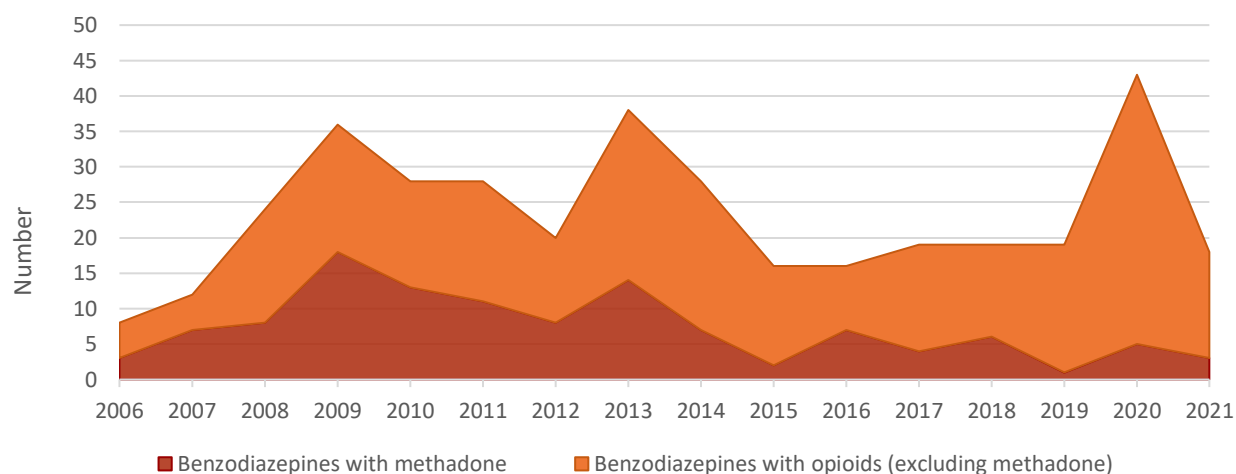


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Previously, the opioid most often involved with benzodiazepine deaths was methadone. In recent years, deaths involving benzodiazepines and methadone have decreased, with three occurring in 2021. Deaths involving other opioids are now more common (**Figure 72**).

Figure 72: Number of Overdose Deaths Due to Benzodiazepines and Opioids, by Mutually Exclusive Involvement of Methadone or Other Opioids in CCSF, 2006–2021

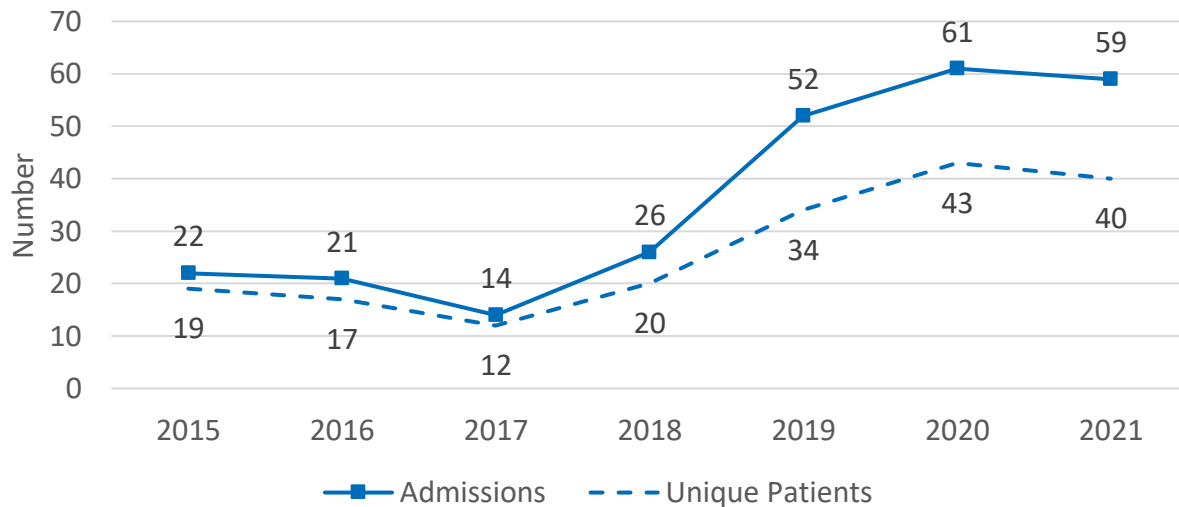


The height of each band corresponds to the number of events in that category. Substance-related overdose deaths were identified using textual cause of death fields. Homicides and suicides were excluded.

Sources: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Benzodiazepine SUD treatment admissions decreased by 3% between 2020 and 2021 (**Figure 73**). Treatment admissions for benzodiazepines represented less than 1% of all SUD admissions in San Francisco in 2021.

Figure 73: Number of Admissions and Unique Persons Admitted to Programs Treating Substance Use Disorders for Benzodiazepines as the Primary Substance in CCSF, 2015–2021



Data include publicly funded treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period.

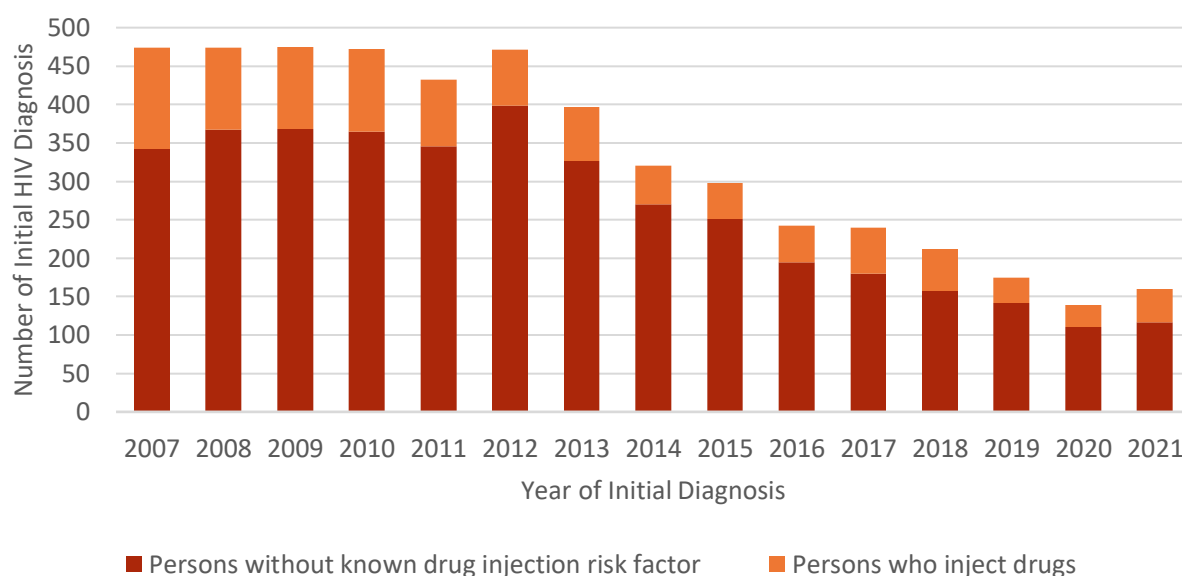
Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

5 HEALTH SEQUELAE RELATED TO SUBSTANCE USE

5.1 HIV

Overall, new HIV diagnoses in San Francisco steadily decreased from 2013 through 2020, but increased in 2021 (**Figure 74**). This apparent increase in 2021 may be reflect an actual increase in infections, or may be due to delays in diagnosis during the 2020 COVID-19 pandemic. Among the 160 new diagnoses in 2021, 49% were among men who have sex with men (MSM); 6% were among transgender women who have sex with men (TWSM); 27% were among people who inject drugs (PWID; 12% among PWID, 14% among MSM-PWID, and 1% among TWSM-PWID); and 18% were among heterosexual and those with other or unidentified risk category. The number of new infections among PWID overall increased from 33 in 2019 to 43 in 2021. Of the approximately 15,631 individuals living with HIV in San Francisco as of December 2021, 19% were PWID.

Figure 74: HIV Infection by Transmission Category of Initial HIV Diagnosis in CCSF



Source: SFPD HIV Epidemiology Annual Report, 2022.

For more information on HIV in San Francisco, see:

2021 Annual Report:
<https://sfdph.org/dph/files/reports/RptsHIVAIDS/AnnualReport2021-Red.pdf>

5.2 HEPATITIS C VIRUS

Hepatitis C Virus (HCV) epidemiology is challenged by the nature of testing for HCV and limits of surveillance capabilities. There are several sources of data regarding HCV in CCSF: (a) surveillance data from SFDPH; (b) data and estimates generated by End Hep C SF; (c) data from the National HIV Behavioral Surveillance Study (NHBS); (d) incidence data from the UFO Study; and (e) results from the Hep C Health Program providing HCV treatment at program sites.

Overall, most HCV infections in San Francisco are among PWID or people with a history of injection drug use. A collaborative effort in San Francisco was found to have resulted in a tripling of the number of people treated for HCV infection in 2016 and 2017 (Facente et al., *Infectious Disease Clinics of North American*, 2018). The best data available as of 2018 suggest approximately 36% of PWID with HCV had been treated for their infection, most of whom achieved cure, defined as undetectable HCV RNA at 12 weeks post-treatment (**Figure 75**).

SFDPH has recently funded or expanded funding to support low-threshold HCV-treatment for PWID and people experiencing homelessness through services including the UCSF DeLiver van, the Street Medicine team, and the San Francisco AIDS Foundation. SFDPH also received funding from the California Department of Public Health for HCV, part of which will support Shanti Project for HCV navigation efforts. Finally, SFDPH also supported the first San Francisco Hepatitis C Research Symposium: Data and Dialogue to End Hep C in 2019 (see <https://endhepcsf.org/san-francisco-hepatitis-c-research-symposium/>).

5.2.1 SFDPH Surveillance

In 2019, 1,234 new HCV cases were reported to SFDPH; this represents an ongoing decline from 1,961 new HCV cases reported in 2016. HCV surveillance captures new positive HCV testing results from laboratories throughout San Francisco. These results may indicate prior exposure or current infection (distinct from HIV, a positive serology for HCV does not necessarily indicate current infection). These data do not represent incidence or prevalence of HCV.

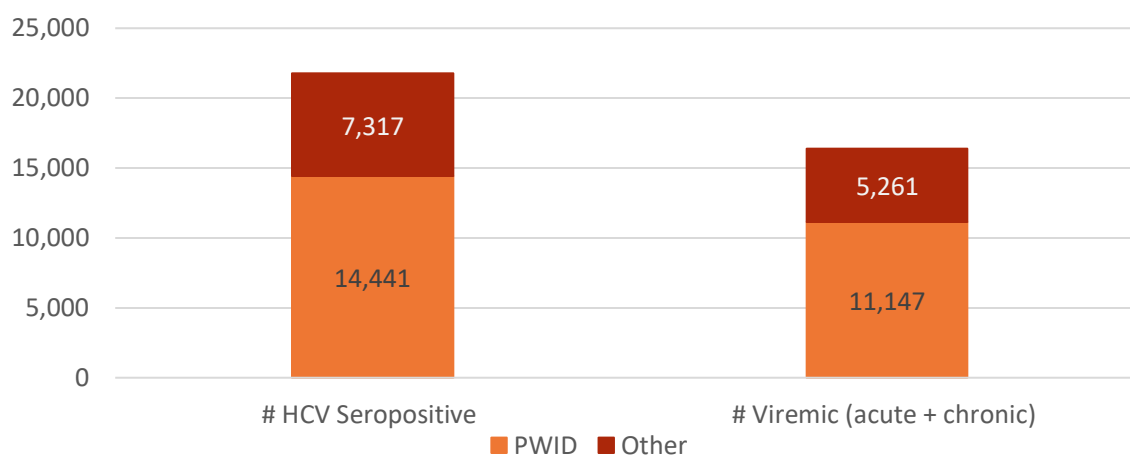
Table 1: Race/Ethnicity of Hepatitis C Cases Reported to Surveillance in CCSF, 2019

Race/Ethnicity of HCV cases newly reported to SFDPH in 2019 (N=1234)	%
White	49.9
Black/African American	15.3
Asian/Pacific Islander	11.3
American Indian/Alaska Native	0.9
Hispanic/Latinx	10.6
Other	12.1

5.2.2 End Hep C SF

End Hep C SF is a multi-sector, collective impact initiative that works to eliminate HCV as a public health threat in San Francisco. To estimate and characterize HCV prevalence, members of End Hep C SF's Research and Surveillance work group developed a local prevalence estimate. As of 2017, there were an estimated 21,758 HCV seropositive (i.e., antibody-positive) persons in CCSF, of whom 16,408 were estimated to be living with current HCV infection. The majority of persons living with HCV infection in 2017 had a history of injection drug use (68%, **Figure 75**). MSM, baby boomers, and transgender women also experienced a disproportionate burden of HCV in CCSF.

Figure 75: Estimated Number of HCV Seropositive and Viremic Individuals in CCSF, 2017



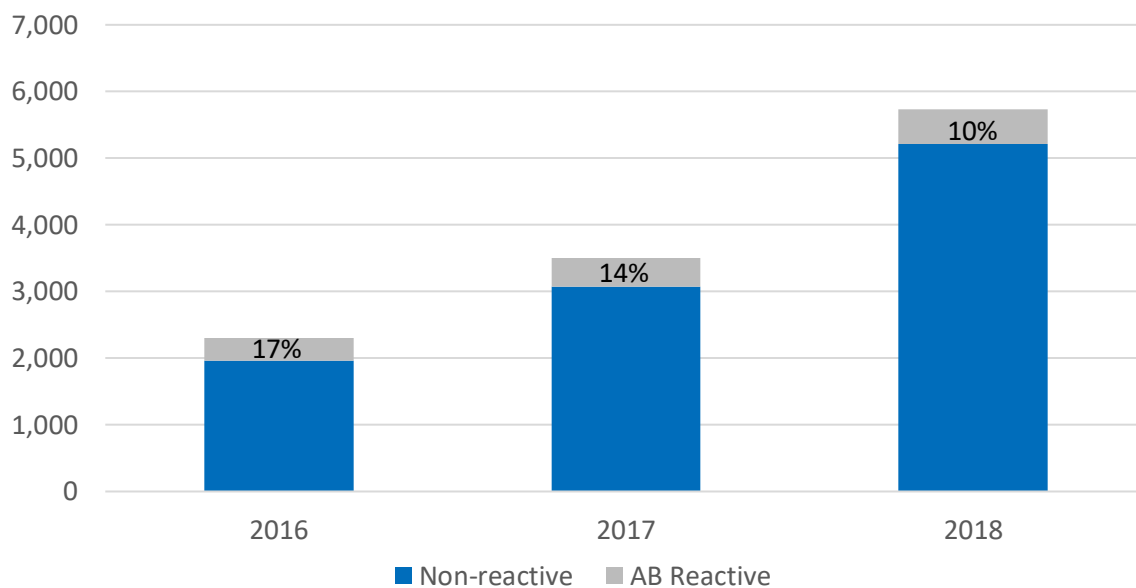
Estimated number of HCV viremic includes those who have been treated and cured of HCV since becoming chronically infected

Source: Facente SN, Grebe E, Burk K, Morris MD, Murphy EL, Mirzazadeh A, et al. (2018) Estimated hepatitis C prevalence and key population sizes in San Francisco: A foundation for elimination. PLoS ONE 13 (4): e0195575

PWID have also been disproportionately burdened by co-infection with HCV and HIV. HCV treatment is covered by Medi-Cal and many other payers for all people living with HIV, and HCV treatment access has significantly expanded in San Francisco since 2014. End Hep C SF developed an implementation plan for HCV elimination among people living with HIV. The main aspects of this implementation program were HCV/HIV surveillance and data management, provider collaborations and technical assistance, and increased support within communities that have the highest barriers to treatment and cure. The HCV Micro-Elimination goal has been planned to be implemented over three years, from 2020-2022. The goals include a 90% reduction of HCV among people living with HIV by the end of 2022 (*Source: End Hep C SF: HIV/HCV Micro-Elimination Planning*).

End Hep C SF also reported on testing conducted by community-based organizations among persons in community settings who experience barriers to access and are less likely to be treated for HCV in a traditional healthcare setting. The data below (**Figure 76**) show the number of rapid HCV tests performed by community-based organizations. In 2018, those community-based organizations tested 5,732 persons for antibodies (Ab) to HCV, 1,685 of whom were PWID. Ten percent of tests were reactive.

Figure 76: Total HCV Tests and Antibody Reactivity by End Hep C SF Annual Evaluation in CCSF, 2016–2018



Source: End Hep C SF Annual Evaluation Report, Year 3.

5.2.3 National HIV Behavioral Surveillance

An additional source of data on HCV in San Francisco is the National HIV Behavioral Surveillance Study (NHBS). NHBS is funded by the Centers for Disease Control and Prevention (CDC) and surveys PWID every three years (most recently in 2018) through respondent-driven sampling. NHBS is able to produce estimates that may approximate disease burden among PWID throughout CCSF.

Among 464 PWID sampled, 67% were male, 67% were white, and 72% identified as heterosexual. The plurality were 45–54 years of age, although from 2005–2018, there was an overall shift toward an older population suggesting the possibility of an aging cohort of PWID in San Francisco (*Source: SFPDH National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division*).

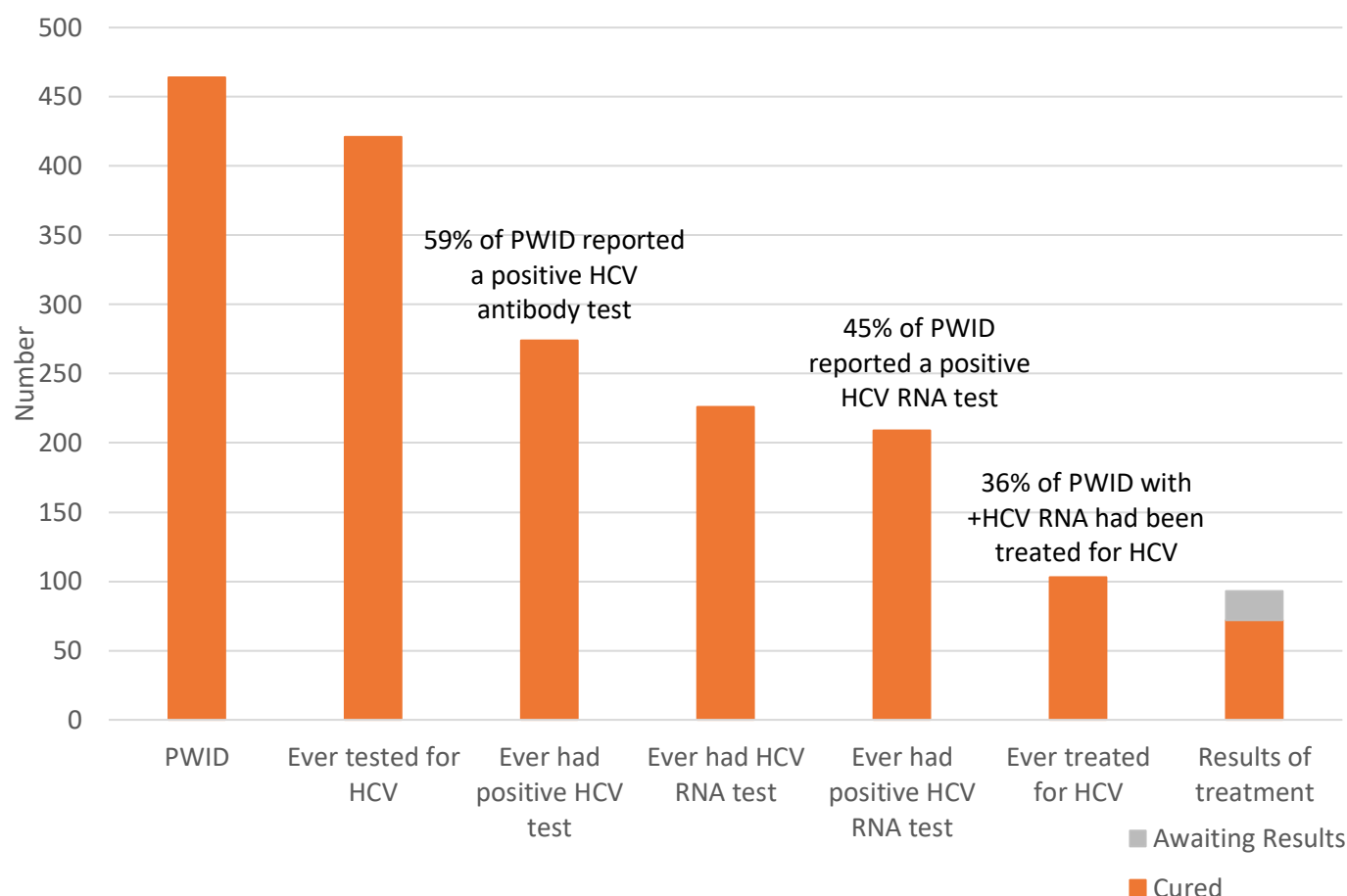
In NHBS, HCV was evaluated both through self-report and, in a subsample, through serology and RNA testing.

5.2.3.1 HCV by Self-Report in NHBS

Among the 464 PWID sampled, 91% reported being tested for HCV at some point. Of those tested, 65% reported they had tested positive, 83% of whom had received an HCV RNA test. Of the 209 respondents who had a positive HCV RNA test, 49% (36% of the total) reported ever receiving HCV treatment, 70% of whom had been cured and 21% of whom were still awaiting results. (**Figure 77**).

Among PWID who reported being tested or being treated for HCV in the NHBS 2018 survey, 75% reported that their most recent test occurred in 2017 or 2018 and 79% reported that treatment occurred in 2017 or 2018.

Figure 77: Hepatitis C Cascade of Care by Self-Report Among PWID in the National HIV Behavioral Surveillance Study in CCSF, 2018



Cured = undetectable HCV RNA at 12 weeks post-treatment.

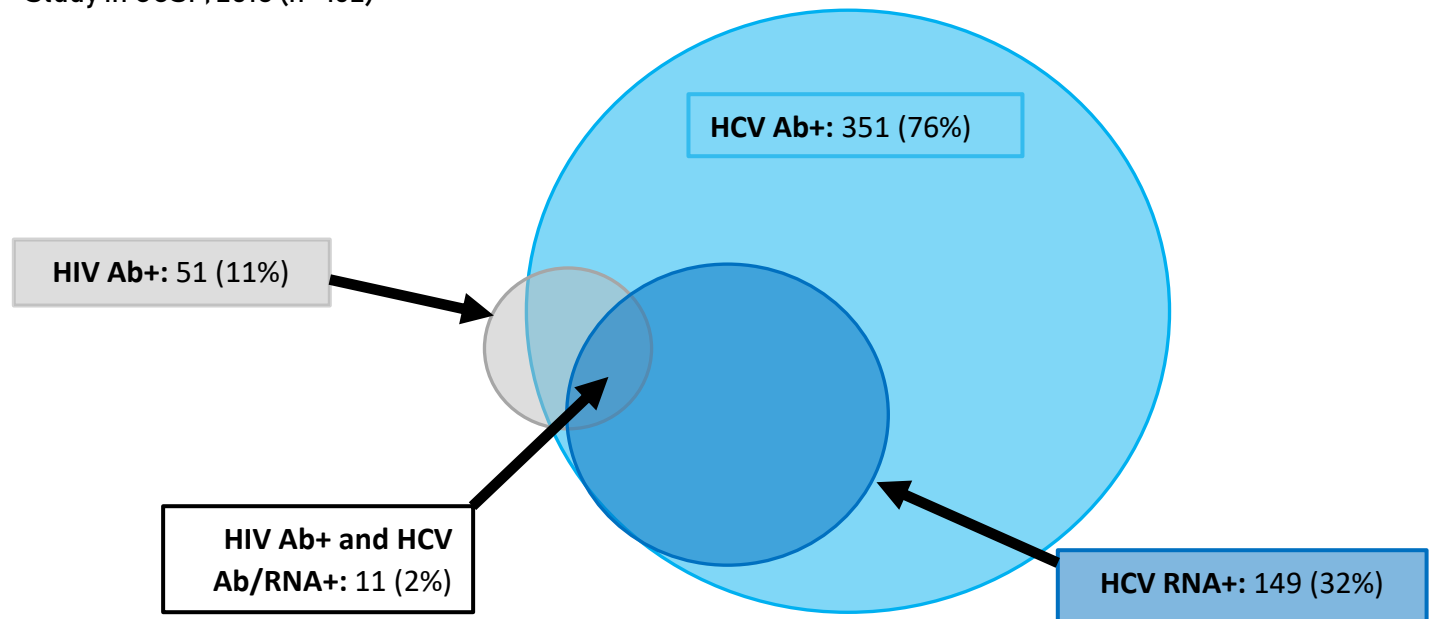
Source: Hep C Health Project, San Francisco AIDS Foundation.

5.2.3.2 HCV by Testing in NHBS

HCV status by self-report in NHBS was supplemented by lab testing, which may more accurately represent current infection status, but would fail to capture the impact of HCV treatment. Of 464 NHBS participants tested for HCV antibodies during the study, 65% were seropositive. Of the 369 persons tested for RNA, 40.3% were living with current HCV infection. Of the 126 persons testing antibody positive but RNA negative (i.e., previously exposed to or infected with HCV, but not currently infected), 49.2% reported having received HCV treatment.

NHBS also evaluated HCV and HIV co-infection. Almost one-third (32.3%) of participants were living with current HCV infection, 11% were living with HIV, and 2.4% were living with both HIV and HCV (**Figure 78**).

Figure 78: HIV and HCV Co-infection Among PWID in the National HIV Behavioral Surveillance Study in CCSF, 2018 (n=462)



HIV Ab+ is evidence of confirmed HIV infection. HCV RNA+ is evidence of confirmed current infection with HCV. HCV Ab+ is evidence of exposure, past infection, or current infection with HCV.

Source: SFPD National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division

5.2.4 UFO Study

The UFO Study followed PWID under 30 years of age who were not previously infected with HCV for the occurrence of incident infections. As of 2007, HCV incidence in this population was 26.7/100 person years. This value had not changed substantially in UFO Study data as recently as 2017 (*Source: Page K, et al. Journal of Infectious Disease. 2009; Personal Communication*).

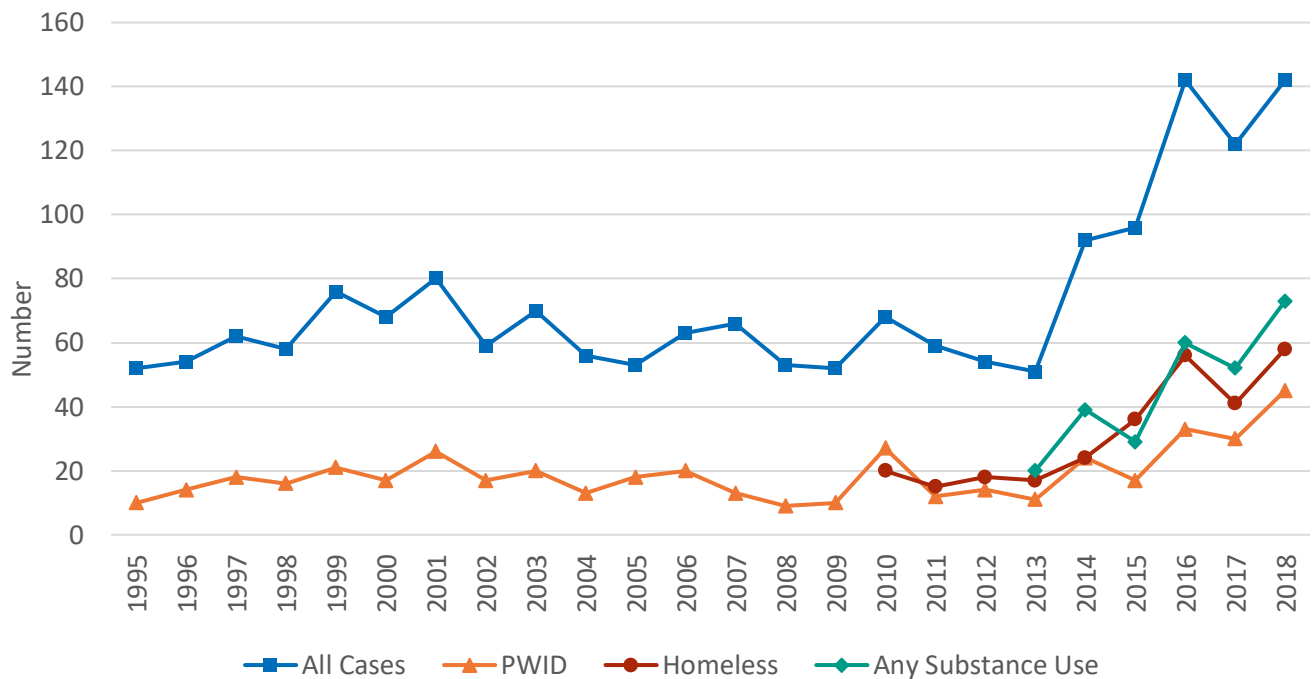
5.2.5 Hep C Health Program

The Hep C Health Program of the San Francisco AIDS Foundation provides treatment for HCV at the 6th Street Syringe Access Program and at Magnet. (*Source: Hep C Health Project, San Francisco AIDS Foundation*).

5.3 GROUP A STREPTOCOCCUS

Group A streptococcus (GAS) is a bacterium that can cause life-threatening invasive infections. Invasive GAS infections are more common among PWID, and persons with limited access to hygiene, compared to the general population. The number of invasive GAS infections increased since 2014 (**Figure 79**). People experiencing homelessness, PWID, and those with any record of substance use account for a substantial proportion of invasive GAS infections. In 2018, 41% of invasive GAS infections were among persons experiencing homelessness, 32% were among PWID, and 51% were among persons reporting any substance use.

Figure 79: Annual Number of Invasive Group A Streptococcus Cases in CCSF, 1995–2018



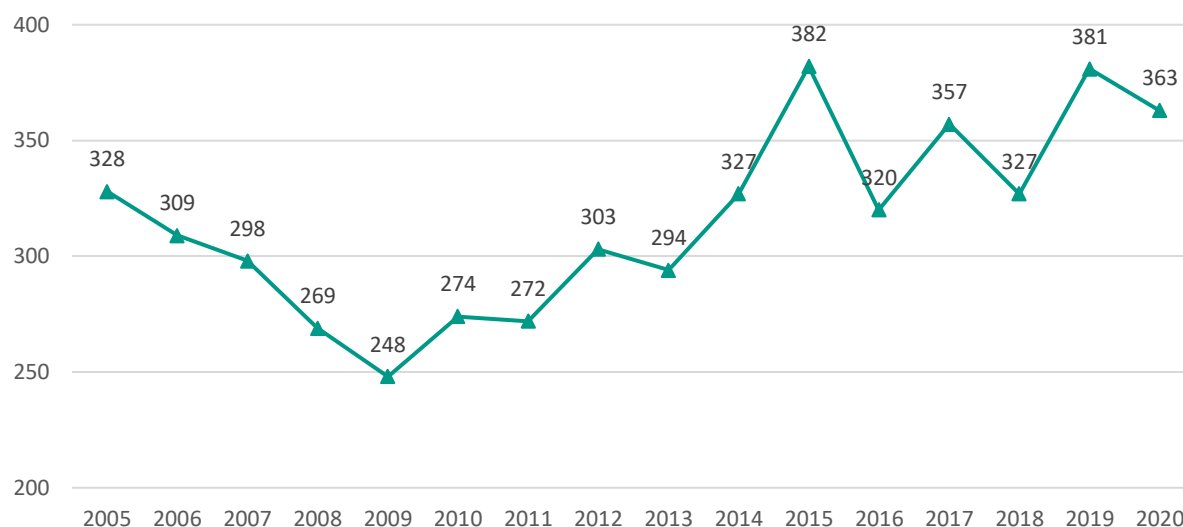
Due to inconsistent data entry, case classification by these characteristics (substance use and homelessness) is not comprehensive. For cases that were not affirmatively identified as individuals who injected drugs, were experiencing homelessness, or used any substance, their status for these characteristics is unknown, and thus the reported counts of cases with each of these characteristics are likely to underestimate the true counts. Year corresponds to date of first positive culture. Data on housing status were only available starting in 2010 and substance use other than injection drug use only available starting in 2013.

Source: California Emerging Infections Program, provisional infectious diseases data provided per Data Request, 12/18/2018.

5.4 ENDOCARDITIS

Endocarditis is frequently a complication of injection drug use, although it can occur in any person. The chart below (**Figure 80**) includes all cases of endocarditis, not limited to those occurring among PWID. As can be seen, the number of hospitalizations for endocarditis increased somewhat from 2009–2014 and have remained over 300 per year since then.

Figure 80: Number of Hospitalizations for Endocarditis in CCSF, 2005–2020



Admissions were identified using ICD-9 codes: 391.1; 397.9; 421.0*; 421.1*; 421.9*; 424.90; 424.91; 424.99; 115.04; 115.14; 115.94; 112.81; 036.42; 074.22; 093.20; 093.21; 093.22; 093.23; 093.24; 098.84; and ICD-10 codes: I33*; I38*; I39*; A01.02; A18.84; A32.82; A39.51; A52.03; A54.83; B33.21; B37.6*; M05.3*; M32.11; I01.1*. Shifts in the trend of hospitalizations and emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.

Source: Hospital admission data for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

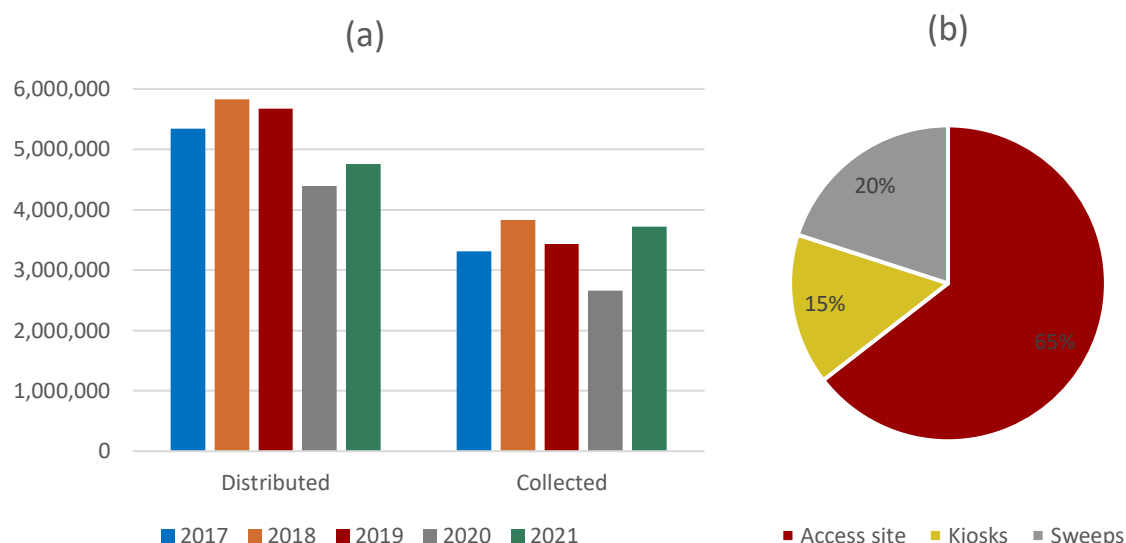
6 ADDITIONAL INTERVENTIONS

6.1 SYRINGE ACCESS

Syringe access programs reduce HIV infection and improve engagement in care for people who use drugs. Furthermore, increased access to syringes decreases the likelihood that injection equipment will carry a blood-borne pathogen. The City and County of San Francisco makes substantial efforts both to ensure access to syringes and associated injection equipment, and to reduce syringe/needle waste. Seventy-eight percent of distributed syringes were collected through dedicated syringe collection activities in 2021 a notably higher proportion than in prior years (**Figure 81**). The main source of syringe collection is syringe access sites (65%), followed by kiosks placed in key locations of San Francisco (15%), as well as manual sweeps conducted by SFPD (20%).

The data below are from the San Francisco AIDS Foundation, Glide Health, San Francisco Drug Users Union, Homeless Youth Alliance, St. James Infirmary, UCSF Alliance Health Project, and the Community Health Response Team of SFPD.

Figure 81: (a) Number of Syringes Dispensed and Collected, 2017–2021 and (b) Sources of Collected Syringes, 2021 in CCSF



Access sites = syringe access programs; Kiosks = syringe disposal units in public spaces; Sweeps = teams of workers collecting syringes from public settings. Syringes collected does not include syringes collected by the San Francisco Department of Public Works.

Source: Community Health Equity and Promotion Branch, San Francisco Department of Public Health.

More information regarding syringe access and disposal programs can be found at:

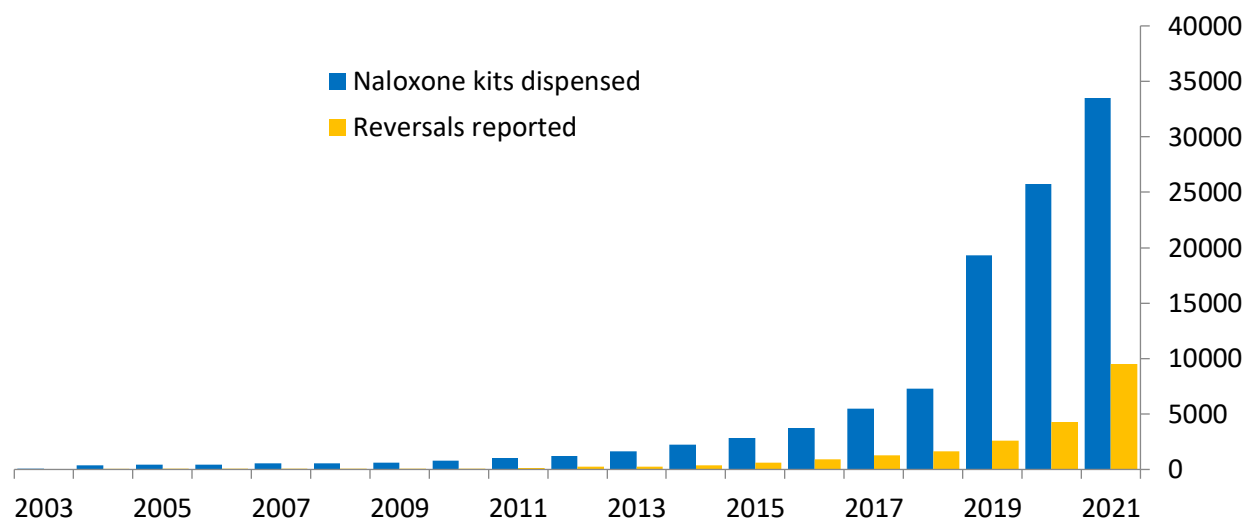
- www.sfhiv.org/syringe.php
- www.sfaf.org/services/syringe-access-disposal/syringe-pick-up-crew/

6.2 NALOXONE

The distribution of naloxone, the short-acting opioid antagonist used to reverse opioid overdose, by community-based organizations continued to increase, with 33,495 kits distributed (47% nasal; 53% injectable) in 2021. Among kits for which data were collected, 13% were first-time recipients of naloxone from the distribution program. Sites reported 9,492 overdose reversals in 2021 (**Figure 82**), a substantial increase over 4,307 reversals in 2020. The actual number of reversals is believed to be several times higher, as most reversals are not reported.

Naloxone distribution in San Francisco is led by the Drug Overdose Prevention and Education (DOPE) Project of the Harm Reduction Coalition, through 23 community partners. The DOPE Project provides naloxone at syringe access sites, some SUD treatment settings, other community settings, and pre-release at the San Francisco County Jail.

Figure 82: Naloxone Kits Dispensed and Reversals Reported to the Drug Overdose Prevention and Education Project, 2003–2021



Source: Drug Overdose Prevention and Education Project

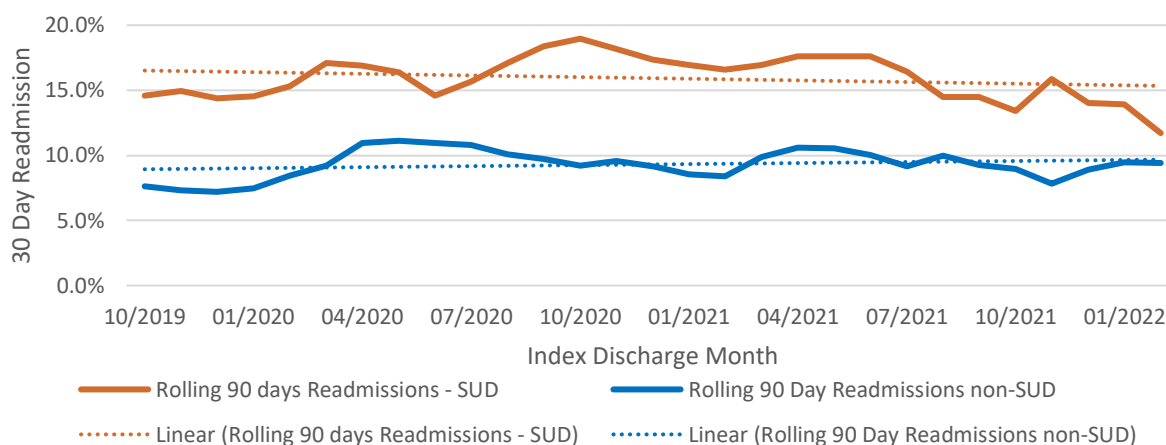
Naloxone is also provided through several other venues, including primary care and pharmacies, at the Behavioral Health Services Pharmacy at 1380 Howard Street, at selected SUD and mental health treatment programs, and at selected emergency departments. In October 2021, the BHS Pharmacy provided 13,221 nasal naloxone kits to 67 programs of the San Francisco Department of Public Health for distribution and collected reports of 2,134 overdose reversals. BHS also distributed 19,000 fentanyl test strips. Project FRIEND, funded by the Substance Abuse and Mental Health Services Administration (SAMHSA), allows paramedics to provide take-home naloxone to at-risk patients and caretakers. Naloxone is also carried by several groups of first responders, including some law enforcement officers.

6.3 ADDICTION CARE TEAM

The Addiction Care Team (ACT) is an addiction consult service at San Francisco General Hospital funded by grants and philanthropy since January 2019. ACT is interprofessional, and includes licensed vocational nurses (LVNs), a nurse practitioner, patient navigators, and physicians. The UCSF Primary Care Addiction Medicine Fellows spend 10 weeks on ACT. The service also has rotations for pharmacy, medical, and nursing students and residents.

In 2021, ACT clinicians and navigators saw 2,110 consults and LVNs saw 1,824; approximately half of ACT patients are Black/African American or Latinx, and most are experiencing homelessness. The 90-day rolling readmissions among patients with substance use disorders at ZSFG have been decreasing since ACT started despite non-addiction readmissions increasing during the same time period (**Figure 83**), suggesting a potential benefit of the service on decreasing readmissions. Preliminary data suggest that deaths rates are lower among people with substance use disorders who were seen by ACT compared to those who were not seen (56% relative reduction in death). Since inception, ACT sees 1 in 10 of all hospitalized patients and 1 in 3 of all patients with a substance use disorder.

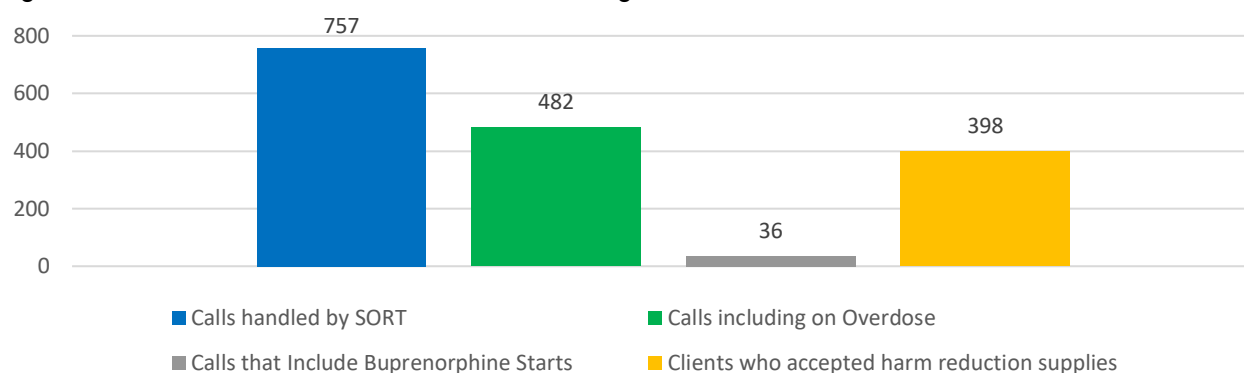
Figure 83: All Cause 30-Day Readmission, 3-Month Rolling Average for Aged 18 and Older, completed by the Addiction Care Team (ACT) at Zuckerberg San Francisco General Hospital from 2019 through 2021.



6.4 STREET OVERDOSE RESPONSE / POST-OVERDOSE ENGAGEMENT TEAMS

Since August 2021, the Street Overdose Response Team (SORT) has responded to dispatch calls that appear to be for an overdose, to provide harm reduction supplies and resources and connect clients to Street Medicine providers. Since October 2021, SORT has teamed with the Post Overdose Engagement Team (POET) to achieve in-person follow-up within 72 hours after an overdose event, including connections to SUD treatment, including buprenorphine treatment, case management, peer support, and medical treatment. The cumulative POET rate of follow-up by December 2021 was 42%. See <https://sf.gov/street-overdose-response-team> for more information.

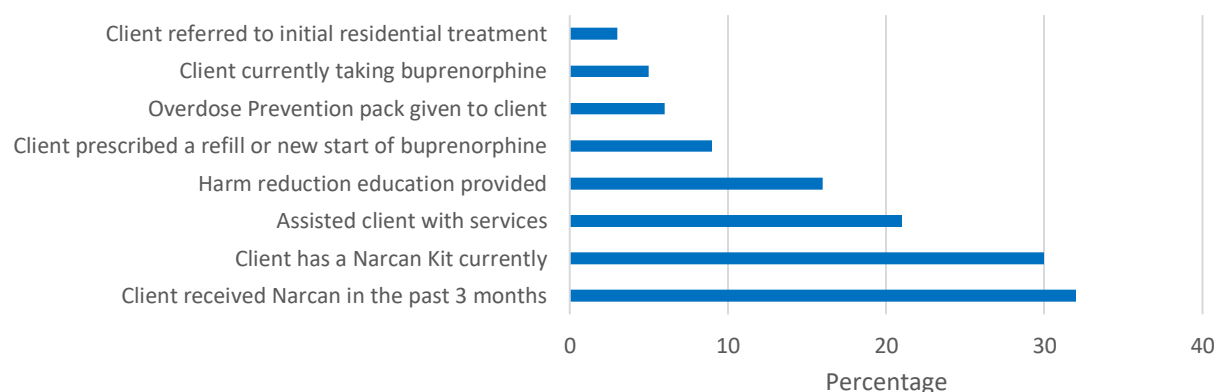
Figure 84: SORT Cumulative Call Counts from August 2021–December 2021



Cumulative counts are on data since pilot launch (August 2, 2021 – December 31, 2021). The SORT Response Team monitors and responds to calls that clearly state or appear to be for an overdose as there is not an overdose-specific dispatch call code. As a result, some calls the team responds to might not include an overdose.

Source: Street Overdose Response Team, City & County of San Francisco

Figure 85: POET Cumulative Percentage Outcomes



Cumulative counts are on data since Post=Overdose Engagement team launch (October 18, 2021 – December 31, 2021). The team follows up on clients who had a recent overdose, and did not refuse follow up (n=214). In December, the client pool expanded to include both unhoused and housed clients.

Source: Street Overdose Response Team, City & County of San Francisco

7 APPENDICES

Table 1 (page 1 of 3): Rate per 100,000 Population of Treatment Admissions, Hospitalizations, ED Visits, and Deaths Involving or Caused by Cocaine/Crack, Methamphetamine, all Opioids, Heroin, Prescription Opioids, Fentanyl and Fentanyl Analogues, Cannabis, Alcohol, and Endocarditis in CCSF, 2005–2021

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cocaine/Crack	Treatment Admissions							180.71	215.33	202.69	142.67	107.50	87.22	78.75	60.25	54.16	40.27	40.48
	Hospitalizations	11.80	4.94	4.24	3.16	2.37	5.46	12.14	10.98	10.84	11.05	11.93	16.87	15.61	25.58	35.84	21.58	
	ED Visits	27.65	39.03	32.49	26.67	22.45	17.50	23.42	24.61	25.84	31.61	33.94	51.64	43.31	48.20	46.77	30.58	
	Deaths		17.43	15.03	10.62	9.73	9.56	10.05	9.29	10.24	10.34	8.34	8.38	10.14	11.48	23.55	30.93	28.09
Methamphetamine	Treatment Admissions							123.33	181.43	195.79	184.74	173.53	192.12	209.35	166.65	154.18	127.16	142.66
	Hospitalizations	11.53	5.72	3.72	3.41	3.12	8.32	6.13	7.12	7.03	9.75	13.32	29.15	28.15	37.51	54.85	50.54	
	ED Visits	36.30	26.80	27.10	25.28	27.06	41.96	38.74	56.34	74.79	118.11	164.73	333.05	305.77	420.84	366.63	329.79	
	Deaths		4.68	4.37	2.65	3.37	3.85	4.90	5.43	7.15	7.29	9.38	10.21	11.40	14.32	29.36	44.43	40.85
All Opioids	Treatment Admissions							440.48	469.50	471.72	544.35	541.33	537.45	518.19	481.09	478.82	415.76	423.58
	Hospitalizations	40.10	37.99	38.27	36.15	36.91	43.20	38.99	40.41	39.18	36.90	51.90	124.64	118.07	126.30	129.60	124.85	
	ED Visits	51.51	51.00	51.75	53.34	55.12	53.38	45.48	57.90	61.33	74.98	102.64	145.41	151.34	221.45	319.86	345.95	
	Deaths		13.40	14.77	14.28	16.71	15.27	14.96	13.63	15.72	14.93	11.70	12.05	15.39	20.35	37.66	67.39	63.54

Table 1 (page 2 of 3): Rate per 100,000 Population of Treatment Admissions, Hospitalizations, ED Visits, and Deaths Involving or Caused by Cocaine/Crack, Methamphetamine, all Opioids, Heroin, Prescription Opioids, Fentanyl and Fentanyl Analogues, Cannabis, Alcohol, and Endocarditis in CCSF, 2005–2021

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Heroin	Treatment Admissions							398.07	414.37	420.39	487.12	483.88	481.44	469.65	434.82	425.91	350.10	318.69
	Hospitalizations	2.88	3.25	3.47	2.53	1.50	1.49	1.96	2.05	1.43	2.23	3.13	4.82	8.09	10.46	9.22	5.31	
	ED Visits	21.36	17.82	14.13	11.25	8.85	7.32	7.72	11.70	12.15	20.92	35.10	48.20	54.47	78.78	59.74	24.69	
	Deaths		4.55	3.47	3.41	2.87	1.24	1.59	2.29	2.98	4.23	3.71	4.82	5.47	6.82	9.22	8.89	8.59
Prescription Opioids	Treatment Admissions							42.17	55.13	51.21	56.88	56.88	54.86	47.30	41.38	34.82	29.89	32.51
	Hospitalizations	17.69	17.69	17.85	14.03	16.09	20.48	18.63	19.30	20.01	18.45	33.83	114.08	103.25	104.92	101.73	90.35	
	ED Visits	17.30	17.04	21.32	22.37	31.92	34.02	29.06	30.64	30.84	33.02	34.64	50.15	45.93	58.66	123.57	178.28	
	Deaths		9.37	11.69	10.87	14.22	13.66	13.61	11.70	13.22	11.52	7.65	6.43	7.29	8.07	9.56	7.96	5.27
Fentanyl and Other Synthetic Opioids	Treatment Admissions							0.25	0.00	0.12	0.35	0.58	1.15	1.25	4.89	18.09	35.77	69.80
	Hospitalizations												4.02	5.70	8.87	17.30	27.00	
	ED Visits												2.52	4.22	16.14	66.45	92.08	
	Deaths		0.65	0.39	0.63	1.00	0.74	1.23	0.72	0.71	0.94	1.27	2.52	4.10	10.23	27.42	59.77	57.90

Table 1 (page 3 of 3): Rate per 100,000 Population of Treatment Admissions, Hospitalizations, ED Visits, and Deaths Involving or Caused by Cocaine/Crack, Methamphetamine, all Opioids, Heroin, Prescription Opioids, Fentanyl and Fentanyl Analogues, Cannabis, Alcohol, and Endocarditis in CCSF, 2005–2021

Substance	Measure	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cannabis	Treatment Admissions							62.0	76.0	87.2	73.8	67.7	53.1	44.4	38.1	29.70	20.42	24.41
	Hospitalizations	3.93	1.17	1.03	0.38	0.87	2.48	2.08	1.69	3.22	2.35	2.55	4.82	5.93	6.02	6.60	7.15	
	ED Visits	9.31	6.50	9.89	8.97	10.60	18.75	19.25	19.30	18.94	26.09	33.02	41.09	47.07	56.95	43.92	27.12	
	Deaths		0.00	0.13	0.00	0.25	0.74	1.10	0.84	2.02	0.35	0.23	0.11	0.00	0.00	0.80	0.92	0.00
Alcohol	Treatment Admissions							293.62	345.37	318.09	280.29	265.74	247.66	230.55	202.23	198.56	145.05	136.41
	Hospitalizations	68.94	76.11	73.20	71.54	72.08	81.81	85.33	90.23	96.11	110.47	113.18	97.21	102.11	101.40	119.59	103.39	
	ED Visits	485.31	444.94	505.22	667.38	714.28	748.59	715.59	671.44	700.25	783.39	912.38	1019.23	1048.13	1001.16	973.69	670.32	
	Deaths		20.69	20.29	19.72	23.82	20.73	21.09	19.06	17.74	19.16	16.33	18.48	14.02	16.37	17.18	27.58	28.95
Endocarditis	Hospitalizations	42.99	40.20	38.27	34.00	30.93	34.02	33.35	36.55	35.01	38.43	44.25	36.72	40.69	37.17	43.35	41.89	

Boxes grayed out where data were not available.

Source: Overdose mortality obtained from the California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS). Deaths caused by any opioid, cocaine/crack, and methamphetamine were due to acute poisoning/overdose; deaths due to alcohol include alcohol-related deaths. Treatment admissions data were provided by the Behavioral Health Services Division of the San Francisco Department of Public Health (SFDPH). Treatment episodes include clients admitted in prior years who were still receiving services in a particular year (e.g., methadone maintenance clients). Hospital admission data for CCSF facilities were provided by the California Office of Statewide Health Planning and Development. Emergency department visit data for CCSF facilities were provided by the California Office of Statewide Health Planning and Development.

Table 2: Number of Substance-Related Deaths by Non-Mutually Exclusive Substance Category in CCSF, 2006–2021

Substance	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Opioids, cocaine, and methamphetamine	181	183	163	182	173	179	183	208	211	187	188	224	261	444	700	625
Opioids	103	115	113	134	123	122	113	132	127	101	105	135	179	331	584	518
Fentanyl	*	*	*	*	*	10	*	*	*	11	22	36	90	241	518	472
Heroin	35	27	27	23	10	13	19	25	36	32	42	48	60	81	77	70
Prescription Opioids	72	91	86	114	110	111	97	111	98	66	56	64	71	84	69	43
Cocaine	134	117	84	78	77	82	77	86	88	72	73	89	102	207	268	229
Methamphetamine	36	34	21	27	31	40	45	60	62	81	89	101	126	258	385	333
Benzodiazepines	10	14	25	43	32	38	26	45	36	23	19	23	21	20	46	27
Alcohol**	159	158	156	191	167	172	158	149	163	141	161	123	144	151	239	236
Cannabis	*	*	*	*	*	*	*	17	*	*	*	*	*	*	*	*

*Overdose deaths were identified use textual cause of death fields. Homicides and suicides were excluded. *= fewer than 10 deaths. **All deaths involve acute toxicity from the given drug, with the exception of alcohol, which includes all deaths attributed to alcohol or alcohol-induced medical conditions.*

Sources: California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Table 3: Number of Fentanyl Overdose Deaths by Mutually Exclusive Substance Categories in CCSF, 2006–2021

Substance	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Fentanyl (with or without any substance)	*	*	*	*	*	10	*	*	*	11	22	36	90	241	518	472
Fentanyl alone (no heroin, cocaine, or methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	12	24	46	104	95
Fentanyl and heroin (no cocaine or methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fentanyl, heroin, and cocaine (no methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	12	10
Fentanyl, heroin, and methamphetamine (no cocaine)	*	*	*	*	*	*	*	*	*	*	*	*	*	13	13	17
Fentanyl, heroin, cocaine, and methamphetamine	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fentanyl and cocaine (no heroin or methamphetamine)	*	*	*	*	*	*	*	*	*	*	*	*	19	50	113	111
Fentanyl and methamphetamine (no heroin or cocaine)	*	*	*	*	*	*	*	*	*	*	*	10	24	58	187	182
Fentanyl, cocaine, and methamphetamine (no heroin)	*	*	*	*	*	*	*	*	*	*	*	*	*	54	71	44

Overdose deaths were identified use textual cause of death fields. Homicides and suicides were excluded. *= fewer than 10 deaths.

Sources: California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS).

Table 4: Admissions to Programs Treating Substance Use Disorders in CCSF, 2015–2021

	2015		2016		2017		2018		2019		2020		2021	
	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)	(#)	(%)
Total Admissions (#)	10,273		10,004		9,710		8,626		8,309		6,707		6,440	
Primary Substance														
Alcohol	2,294	22.3%	2,158	21.6%	2,023	20.8%	1,779	20.6%	1,745	21.0%	1,257	18.7%	1,112	17.3%
Cocaine/Crack	928	9.0%	760	7.6%	691	7.1%	530	6.1%	476	5.7%	349	5.2%	330	5.1%
Heroin	4,177	40.7%	4,195	41.9%	4,121	42.4%	3,825	44.3%	3,743	45.0%	3,034	45.2%	2,598	40.3%
Prescription Opioids	491	4.8%	478	4.8%	417	4.3%	366	4.2%	306	3.7%	259	3.9%	287	4.5%
Fentanyl	*	*	10	0.1%	*	*	41	0.5%	159	1.9%	310	4.6%	569	8.8%
Methamphetamine	1,498	14.6%	1,674	16.7%	1,837	18.9%	1,466	17.0%	1,355	16.3%	1,102	16.4%	1,163	18.1%
Cannabis	584	5.7%	463	4.6%	390	4.0%	335	3.9%	261	3.1%	177	2.6%	199	3.1%
Benzodiazepines	22	0.2%	21	0.2%	14	0.1%	26	0.3%	52	0.6%	61	0.9%	59	0.9%
MDMA	13	0.1%	*	*	*	*	*	*	11	0.1%	*	0.1%	*	0.1%
Other Drugs/Unknown	261	2.5%	240	2.4%	210	2.2%	251	2.9%	201	2.4%	152	2.3%	117	1.8%

Data include publicly funded and methadone maintenance treatment services, excluding the Veterans Administration. Each admission may not represent a unique individual because some individuals were admitted to treatment more than once in a given period. *= fewer than 10 admissions.

MDMA= 3,4-methylenedioxy-methamphetamine

Source: San Francisco Department of Public Health (SFPDH), Behavioral Health Services Division.

Table 5: Naloxone Kits Dispensed and Reversal Reports to the Drug Overdose Prevention and Education Project, 2006–2021

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Naloxone Kits Dispensed	437	539	569	606	791	1,029	1,237	1,630	2,212	2,850	3,854	5,499	7,306	19,335	25,725	33,495
Reversals	81	87	72	86	62	125	274	275	365	604	886	1,247	1,658	2,604	4,307	9,492

Source: Drug Overdose Prevention and Education Project.

8 SOURCES

Data	Source and Description
Deaths	California Electronic Death Registration System (CA-EDRS) via the Vital Records Business Intelligence System (VRBIS), accessed on 26 June 2020. Substance-related deaths were identified using textual cause of death fields. Homicides and suicides were excluded.
Treatment Admissions	Behavioral Health Services Division of the San Francisco Department of Public Health (SFPDH). Treatment episodes include clients admitted in prior years who were still receiving services in a particular year (e.g., methadone maintenance clients).
Hospitalizations	California Office of Statewide Health Planning and Development. Admissions by substance or for endocarditis were identified using ICD code as specified in the body of the report. Admissions that resulted in death were excluded. Shifts in the trend of hospitalizations visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.
Emergency Department Visits	California Office of Statewide Health Planning and Development. Visits by substance were identified using ICD codes. Visits that resulted in death were excluded. Shifts in the trend of emergency department visits from 2015 to 2016 may be artifacts of a change to the way healthcare visits were coded in the U.S. (from ICD-9 to ICD-10) that occurred on October 1, 2015.
Prescription Data	Opioid prescription data, including buprenorphine, were provided by the California Controlled Substance Utilization Review and Evaluation System (CURES 2.0)
HIV	HIV Epidemiology Annual Report 2021, San Francisco Department of Public Health, August 2022
Hepatitis C	Viral Hepatitis Surveillance Program, Applied Research, Community Health Epidemiology and Surveillance Branch (ARCHES), Population Health Division. Viral Hepatitis C Surveillance Report 2018- 2019, San Francisco, California. San Francisco Department of Public Health; July 2021. 17 pp. Available from: www.sfdcp.org/communicable-disease/publications-data-and-reports/ Facente SN, Grebe E, Burk K, Morris MD, Murphy EL, Mirzazadeh A, et al. (2018) Estimated hepatitis C prevalence and key population sizes in San Francisco: A foundation for elimination. <i>PLoS ONE</i> . 13 (4): e0195575 End Hep C SF Annual Evaluation Report, Year 3 (http://www.endhepcsf.org/end-hep-c-sf-year-3-evaluation/) End Hep C SF: HIV/HCV Microlamination Planning (http://www.endhepcsf.org/end-hep-c-sf-micro-elimination-plan/) SFPDH National HIV Behavioral Surveillance, Center for Public Health Research, Population Health Division Hep C Health Project, San Francisco AIDS Foundation Page K, Hahn J.A., Shiboski S, Lum, P, Delwart E, et al. (2009) Acute hepatitis C virus infection in young adult injection drug users: A prospective study of incident infection, resolution and reinfection. <i>Journal of Infectious Disease</i> . Doi: 10.1086/605947
Group A Strep	Provisional infectious diseases data by the California Emerging Infections Program, per data request, 12/18/2018

Sobering Center, SORT/POET	San Francisco Department of Public Health
Naloxone	Drug Overdose Prevention and Education Project, San Francisco Department of Public Health
Syringe Access	Community Health Equity and Promotion Branch, San Francisco Department of Public Health
Addiction Care Team	Addiction Care Team, UCSF / Zuckerberg San Francisco General Hospital